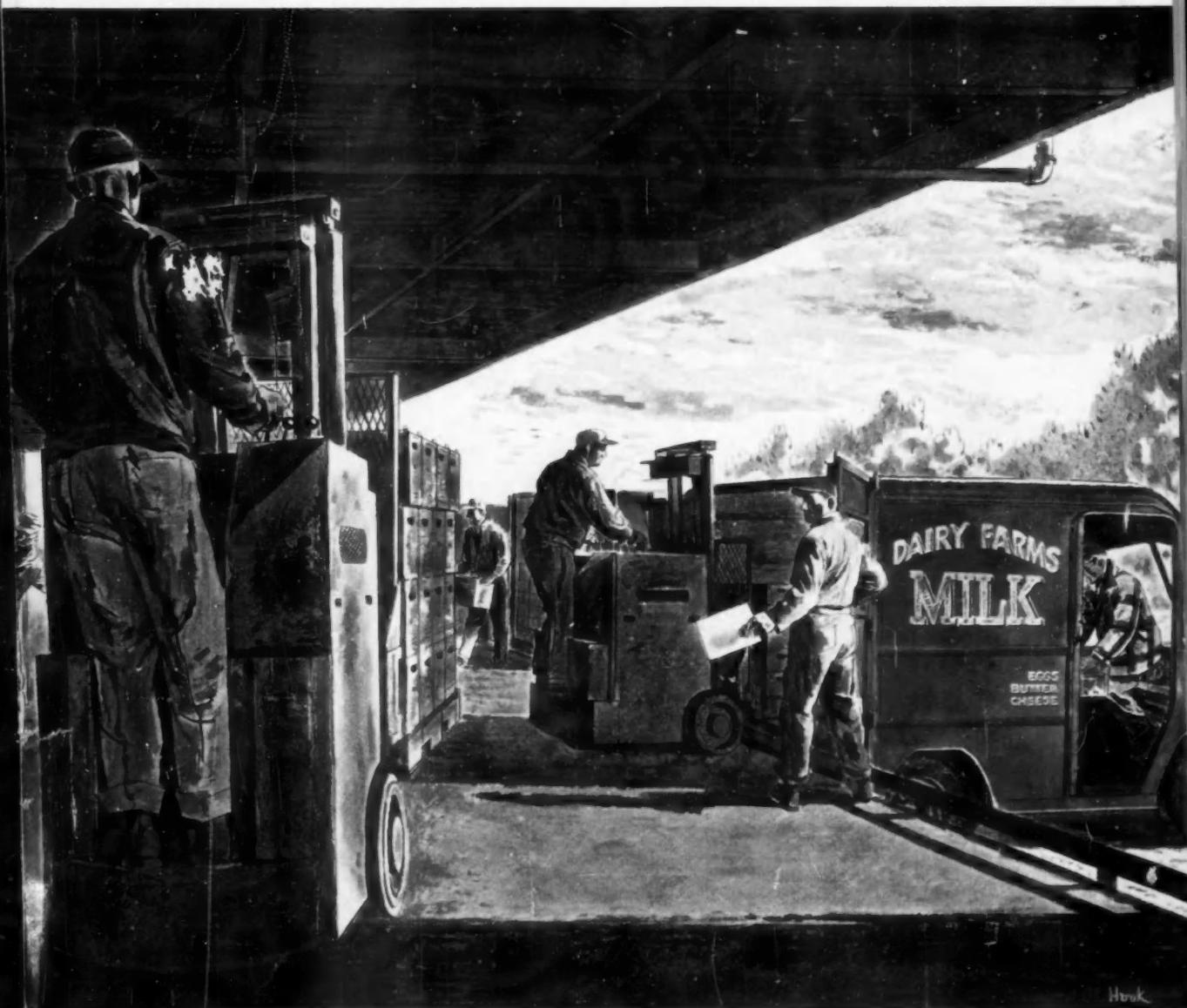


MARCH 1956

COMMERCIAL CAR JOURNAL

A CHILTON PUBLICATION

THE MAGAZINE FOR TRUCK AND BUS FLEET OPERATORS



in this issue

Gaging the GM Diesel in 20 Minutes
Shop Hints from Super Service
Coastwise "Fishy-Back" Ready for Launching

"Truck teamwork demands Dodge dependability"



says E. L. Culver, President

National Pool Equipment Co.
North Birmingham, Alabama



This year, the dealers of the National Pool Equipment Company will deliver more than 1,000 swimming pools in all parts of the United States. Concrete units for these pools are pre-cast in plants located in principal cities, then shipped by truck caravans to construction sites.

"In such long-distance haulage", says E. L. Culver, President, "the failure of one truck in the caravan could hold up the entire job; lose us time, money, and customer good will.

"This kind of truck teamwork demands Dodge dependability. Low operating and maintenance costs are also essential—and that's the reason we use Dodge trucks exclusively."

You can depend on your Dodge dealer, just as you can depend on Dodge trucks. And he's as near as your telephone. That's why we say: Get your Dodge Dealer's Deal before you decide!

DODGE
Job Rated
TRUCKS

WITH THE FORWARD LOOK





Ugly denting and costly dent repairs are prevented by $\frac{1}{8}$ "-thick heat-treated aluminum alloy panels

Before You Buy Trucks Consider These Points

You choose between waste and economy in deliveries when you purchase your trucks. Buying the wrong delivery bodies is like throwing money out of the window!

1. Thin body-metal dents easily. It takes 20 to 30 thickness of thin body metal to make 1 inch. It takes only 8 thickness to make an inch of the aluminum alloy plate used in Olson side panels, side skirts, rub rails, rear panels and floors.

2. Steel weighs 3 times as much as aluminum. That is why body weights are left out of many catalogues. If a steel body is light in weight, it is made of very thin metal which dents easily. If it is made of thick steel, it means excess dead-weight, extra gasoline, more tire wear and shorter brake and clutch life.

3. Corrosion is no bargain at any price — aluminum-body users report lower repair costs than with the steel bodies they formerly used.

4. Body length is not the only factor; extra width means extra payload and a lower load level. Olson Bodies are 78 inches wide.

5. Side door openings vary — a narrow door is cheaper but it is a handicap in working the payload.

6. Side doors without roller-type windows are another way of trying to undersell Olson Bodies which have roller-type windows on both sides of the cab.

7. Flat-top engine housings provide desk space for routemen, their records, call slips, special deliveries, etc. Slanted engine covers are cheaper to make — otherwise no trucks would have them.

8. A panoramic windshield with E-Z-Eye Glass is a safety bargain compared with plate glass windshields with obstructing corner posts.

9. Flat-top wheelhouses are standard equipment with Olson Bodies. Others often charge extra for them.

10. The entire underbody of Olson Bodies is treated with Koppers Bitumastic as standard practice. Others often charge extra for underbody protection.

11. Flimsy rear bumpers and steps cost less and are worth less. Our rugged Olson rear bumper-and-step weighs 96 lbs. and extends rearward 9½ inches. It is standard equipment at no extra cost and saves the rear-end denting so common to route truck bodies with inadequate bumpers.

12. Some body-builders also charge extra for 58" rear doors and for glass in the rear doors. Olson bodies are available with either 38" or 58" rear doors and with or without glass, without extra charge.

13. Some body-makers charge extra for roof insulation. We do not.

14. Some guard rails damage easily. Olson rub rails are $\frac{1}{8}$ -inch thick extrusions — at no extra cost.

15. Some driver seats extend back into the loadspace. Olson cabs are spacious and even provide space for extra cargo on peakload days.

16. Check the storage facilities for tools, records, routemen's coats, etc., before you buy. Olson Bodies have 3 spacious storage compartments.

17. Study the Standard Equipment of Olson Bodies and add to it Grumman's Quarter Century of Aerotype Aluminum Know-How and see how much more you get with Olson Bodies compared with steel bodies and the aluminum bodies now being offered by steel-body makers.

18. Any intelligent mechanic can replace Olson Aluminum Panels easily, but do you know of a single truck mechanic who knows how to repair cracked plastic panels or how to repair magnesium components without fire risk?

Frequent-stop deliveries need the "start, stop and go" engine qualities and the cooling-system efficiency of passenger cars, which are designed to function quickly and economically in city traffic. Otherwise, you will have overheating, burned and cracked valves and fewer miles per gallon of gasoline.



KURB SIDE

The Bodies that Converted Steel Body-Builders to Aluminum

Ask Your Chevrolet, Ford or GMC Dealer or Write for Catalogue today.
J.B.E. Olson Corporation, 1740 Broadway, New York 19, N. Y. Tel. COlumbus 5-4300

COMMERCIAL CAR

EDITORIAL STAFF

Charles Bartlett Rawson, Editor

Murray K. Simkins Managing Editor
 Ernest S. Forest Associate Editor
 Jack Colgan Special Features Editor
 Joseph Geschelin Detroit Tech. Editor

Leonard Westrate Detroit News Editor
 R. Raymond Kay Pacific Coast Editor
 Howard Kohlbrenner Art Director
 George Baker, Ray M. Stroupe, Neil R. Regeimbal.....

Marcus Ainsworth Statistician
 Paul Wooton Washington Member
 of the Editorial Board
 Washington News Editors

THIS MONTH'S FEATURES

- Gaging the GM Diesel.** 66
 CN&C's Grenert describes his bus fleet's 20-minute inspection that provides complete analysis of engine condition
- The Milk Route.** 69
 Milk industry says it uses more trucks than are used in delivery of any other single commodity—close to 400,000
- Shop Hints from Super Service.** 70
 Four pages of mechanic-designed time-savers and cost-cutters used in the shops of this over-the-road diesel fleet
- System Maintenance for Two-Way Radio.** 74
 Motorola's Joseph Jatis discusses how to organize a PM program for your fleet's mobile communications equipment
- "Fishy-Back" Ready for Launching.** 76
 McLean's Pan-Atlantic starts Houston-New York service next month carrying demountable trailer bodies on tanker decks
- Roads, Taxes and Equipment.** 78
 Sharp comment from last month's Private Truck Council annual meeting on three important fleet operating topics

- Air Conditioning in the Fleet Field.** 80
 In response to fleet operator interest, here's an analysis of equipment designed to cool trucks and passenger cars
- Bonded Pistons for Heavy-Duty Service.** 82
 United Engine & Machine's Reynolds answers the question of when is the molecular-bonded bi-metallic type of value?
- Chevrolet Goes to 32,000 lb GVW.** 90
 New 2½-ton models have 195-hp, 322-cu in. V-8 engine with automatic transmission, range up to 50,000 lb GCW
- Tires, Terminals, Trucks.** 92
 Inland Motor Freight cut costs \$170,000 in one year by applying sound economics to attain greater utilization
- FWD Cab-Overs for 1956.** 94
 New heavy-duty service line includes 12 models with 131 to 240 hp, 14,500 to 40,000 lb GVW, 142 to 154 in. wheelbase
- Fuller's New RoadRanger.** 96
 All-air shift combines 5-speed transmission with 2-speed auxiliary to give 10 forward speeds without gear splitting

DEPARTMENTS



ON THE COVER . . .

When the milkman stops at your door, he's driving one of the nearly 400,000 trucks that make up the dairy fleet. There's a heap of transportation involved behind that door-step delivery, including the farm-to-market hauls. That fork lift operation shows one of the many steps by these fleets in their never-ending search for more efficient truck transportation. You'll find more details on page 69.

EPA

NBP

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

Reg. U. S. Pat. Off.

Member B.P.A.

RUSSELL W. CASE, JR., Publisher

E. W. HEVNER, Cir. Mgr.

E. H. MILLER, Adv. Mgr.

JOHN W. FLOOD Research

COMMERCIAL CAR JOURNAL is published monthly by Chilton Co., N. W. Cor., Chestnut & 50th Sts., Philadelphia 28, Pa. Subscription price: United States and Possessions, \$3.00 per year; all other countries \$10.00 per year. Single copies 50¢, except Apr. and Nov.—\$1.00. Accepted under controlled circulation at Philadelphia, Pa.

The Overload	5
At Your Service	9
Up Front with CCJ	17
Dates and Doings	23
Bulletin Board	62
Laugh It Off	64
Shop Hints	70
New Product Descriptions	84

REGIONAL MANAGERS

R. J. BIRCH, San Francisco	J. A. LAANSMA, Detroit
GORDON A. BRAUNINGER, Dallas	FRANK W. McKEE, San Francisco
ROBERT M. CAIRD, JR., New York City	CURTIS B. MOSS, Chicago
E. E. ELDER, Detroit	WILLIAM P. SAUNDERS, Cleveland
L. H. JACKSON, Los Angeles	H. M. WERTZ, Chicago

OFFICES

Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone SHerwood 8-2080
Chicago 1, Ill.—360 North Michigan Ave., Phone FRanklin 2-4213
Cleveland 14, Ohio—730 National City Park Bldg., Phone CHerry 1-4188
Dallas 18, Texas—8557 Eustis, Phone DAvis 7-4176
Los Angeles 2, Calif.—3150 Wilshire Blvd., Phone DExbury 5-2000
New York 17, N. Y.—100 East 42nd St., Phone OXFORD 7-3218
San Francisco 4, Cal.—390 Montgomery St., Phone DOuglas 2-4393
Washington 4, D. C.—1091 & 1093 National Press Bldg., Phone EXecutive 3-3474

JOURNAL

MARCH, 1956 VOLUME 91, No. 1
Copyright 1956 by Chilton Company (Inc.)

Dairy Fleet Swings to "Live" Axles.....	98
Detroit Creamery reports on its use of "live" trailer axles to power reefer units for milk and ice cream delivery	
Let Jack Do It.....	100
What to consider in selecting jacks for shop use and how to get the most use from them safely after you have them	
Magnaflux Without Electricity.....	102
Dana's "Powr-Lok" Differential.....	102
K & B's Brake Safety Valve	104
Talco's Ballistic Brake Actuator.....	104
Studebaker's 245-cu in. Engine.....	106
Fruehauf's "Hasko-Struct" Reefer.....	106
Torque Converter Fluid, Type A or C?.....	166

Fleetman's Library	88
March News Roundup.....	108
New Truck Registrations.....	110
Fleet Course Calendar.....	144
Introducing	220
Fleet Notes	222
Safety Awards	224
Factory Flashes	224
Among the States.....	227

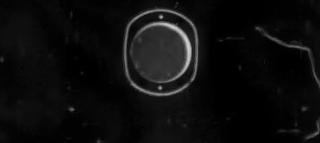


One of the Publications Owned by
CHILTON COMPANY (INC.)
Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors

JOSEPH S. HILDRETH, Chairman of the Board
G. C. BUZBY, President
Vice-Presidents

P. M. FAHRENDORE HARRY V. DUFFY
WILLIAM H. VALLAR, Treasurer JOHN BLAIR MOFFETT, Secretary
GEORGE T. HOOK ROBERT E. MCKENNA
L. V. ROWLANDS IRVING E. HAND
MAURICE E. COX EVERETT B. TERHUNE, JR.
FRANK P. TIGHE RUSSELL W. CASE, JR.
JOHN C. HILDRETH, JR.



is
ugly
"accessory rust"
defacing
the
sides
of your
trucks?



Yankee's "Alumiline"
armored clearance-
marker lights and
reflectors can't rust...
and aluminum is lighter,
adds to payloads.



Send for complete catalog of fleet safety accessories
YANKEE METAL PRODUCTS CORP., Norwalk, Conn.



"Mike wants a longer run, boss — it'll give him more time
to enjoy his full-depth Airfoam seat!"

AIRFOAM SMOOTHES THE BUMPS, relaxes cramped limbs — helps keep drivers cool, calm, on-the-beam — in better shape to do a better job for you.

AIRFOAM CUTS MAINTENANCE COSTS, TOO! It outlasts all other types of seat cushioning and its gentle resilience helps preserve seat covers! Goodyear, Automotive Products Department, Akron 16, Ohio.

Simply specify FULL-DEPTH



Airfoam MADE ONLY BY **GOODFYEAR**

The World's Finest, Most Modern Cushioning

You can get full-depth AIRFOAM

SEATS  and BACKS

as original equipment on any truck!

Airfoam — T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

COMMERCIAL CAR JOURNAL, March, 1956

The OVERLOAD

E D I T O R I A L C O M M E N T

Common Road, Uncommon Thinking

BEST PROPOSALS yet for financing the stepped up Federal highway program are contained in HR 9075, familiarly known as the Boggs bill (this issue, page 19). Introduced early in February, it has already gained the "unequivocal support" of American Trucking Assns. along with a growing list of other highway user groups. At last the truck industry has a bill it can be for!

The Boggs bill provides the fund-raising means to support the revised Fallon bill (HR 8836) which this year avoids the revenue issue, blueprints only the spending. Basically the Boggs measure is fair, specifies an across-the-board tax increase on fuel and rubber, brings the excise tax on commercial vehicles up to the same level as passenger cars.

But all is not rosy yet.

Truckers are going to have to get used to the idea of a federal tax increase (estimated by ATA) of about \$64 on medium size 2-axle trucks to about \$325 on a 5-axle combination. (Average passenger car increase: about \$6.50). Coupled with existing taxes this will provide a *per mile* tax ratio on truck combination of approximately 4 to 1 compared with passenger cars. This is almost identical to the toll differential set up on most privately-financed turnpikes.

The Fallon bill, though infinitely better than last year's highway planning proposals, still contains the Congressman's closed-door policy on future developments — namely the freeze on size and weights. It would prohibit federal-aid to any state that raises existing limits beyond those provided in the AASHO code. Even though higher limits may not be needed or contemplated now, it's just not good business to have a federal statute on the books against future progress.

But the real "stinker" comes from the American Automobile Assn. Because the Boggs bill

has no "soak-the-truck" provision it does not suit this alleged defender of passenger car owners.

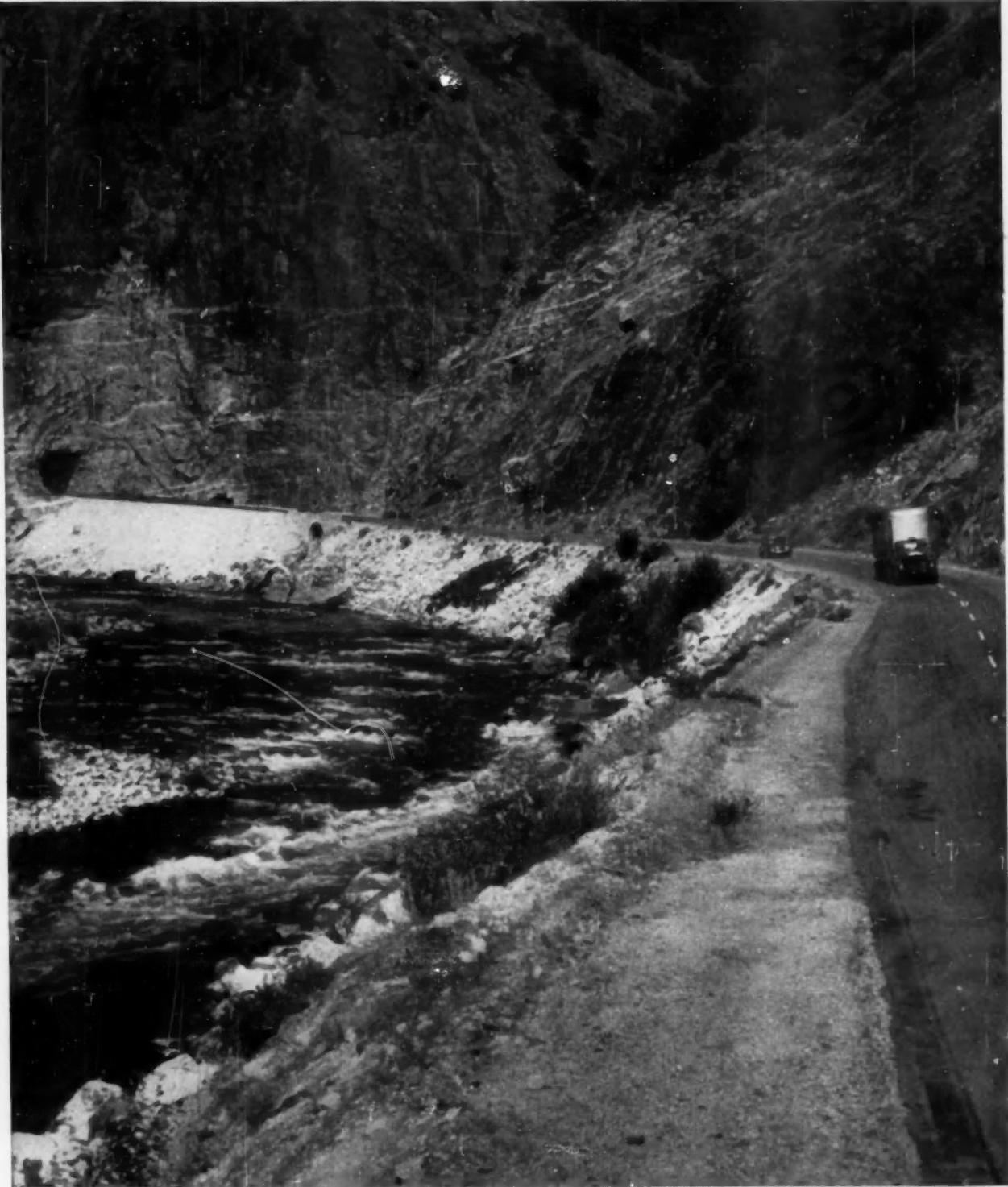
Week after the Boggs bill was introduced we received our copy of the AAA's four-page pamphlet entitled "Why Heavy Trucks Should Pay Higher Tax Rates." We are sure that by now every Congressman and every newspaper editor has his copy.

Specifically the brochure does not mention the Boggs bill since it was prepared before that bill was introduced. But it is being used in conjunction with a campaign that says—in essence—that the Boggs bill does not provide enough truck taxes and implies that trucks will pay no more increases than passenger cars. How far that is from the true picture is briefly noted above and spelled out in excellent detail in a four-page release from ATA, dated Feb. 13, and titled: "Trucking Industry Statement on Highway Bill Financing." We strongly urge that readers interested in the detailed facts ask for a copy of both AAA and ATA statements which are available from the latter.

There is one question, however, that the truck industry statement modestly omits. Just who does the AAA represent? Frankly we don't know. But we do know a good many members who have never been asked to attend a meeting, to give an opinion or to cast a vote for an officer or director. We do know that most of the AAA campaigns are persuasive rather than representative, hoping that most members will go along. And we do know that research behind the current AAA anti-truck campaign is under the guiding hand of a man who was formerly director of "Competitive Transportation" for the American Railroad Assn.

What a great pity that the elected representatives of the trucking industry and those who attempt to lead motorists' thinking cannot find a common view on the road they travel together.

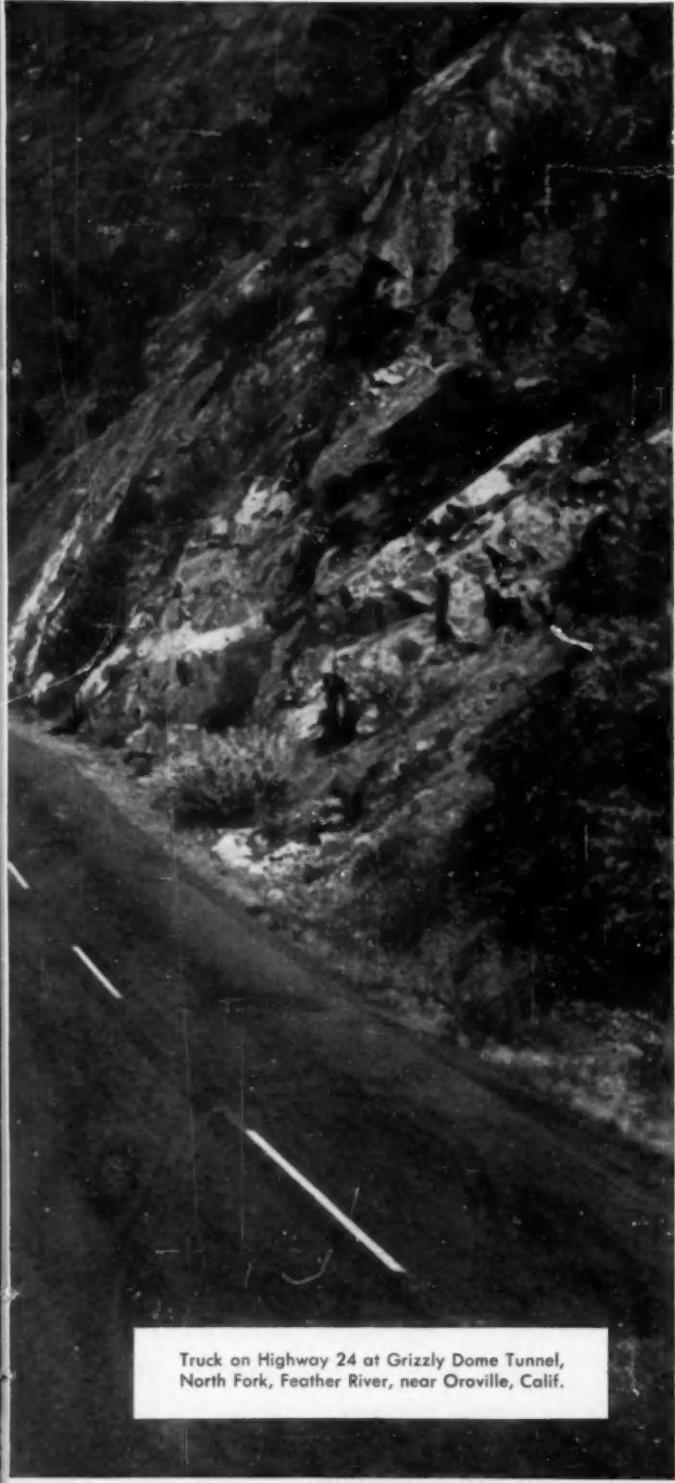
Bart Rawson
Editor



TUNE IN:
TEXACO STAR THEATER
starring
JIMMY DURANTE
on TV Saturday nights.
METROPOLITAN OPERA
radio broadcasts
Saturday afternoons.



TEXACO



Long on mileage... short on costs...

TO PILE UP extra miles of repair-free engine performance between overhauls...to stretch your fuel mileage and reduce maintenance costs...lubricate with *Texaco D 303 Motor Oil HD*.

Texaco D 303 Motor Oil HD keeps both gasoline and diesel engines clean in rugged heavy duty service. Its full detergent and dispersive properties effectively prevent deposit build-ups. You're assured of free rings and valves, proper compression and combustion. And the extra-tough film of *Texaco D 303 Motor Oil HD* prolongs parts life, reduces wear and upkeep costs.

For chassis lubrication, use famous *Texaco Marfak*. It stays in the bearings for lasting protection against wear and rust. Extend wheel bearing life with *Texaco Marfak Heavy Duty*. It seals itself in, seals out dirt and moisture, requires no seasonal change. And for multi-purpose use—in chassis, wheel bearings, water pumps and other grease-lubricated parts—use new lithium-base *Texaco Marfak Heavy Duty Special 2*.

In transmissions and differentials, use *Texaco Universal Gear Lubricant EP* for smooth, quiet gear operation under all service conditions.

A Texaco Lubrication Engineer will gladly help you achieve greater fleet efficiency and economy. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

Truck on Highway 24 at Grizzly Dome Tunnel,
North Fork, Feather River, near Oroville, Calif.

Lubricants and Fuels FOR THE TRUCKING INDUSTRY

NOT 80% NOT 90% BUT ALL
major car manufacturers
use Sealed Power compression
and oil rings for original
equipment and/or service.

**This is the Sealed Power IB-10U
Chrome Top Compression Ring**

29 leading engine builders use Sealed Power Top Chrome Rings in original equipment
Sealed Power also supplies many of these builders steel oil rings for original equipment use

**This is the new
Sealed Power CS-50U
Side-Sealing Oil Ring**

Excessive oil cannot escape around ring under high vacuum conditions caused by deceleration, because the crowned spring forces side rails snugly against sides of ring groove. New spacer design assures a full flow of oil and resists sludging.



SEALED POWER CORPORATION • MUSKEGON, MICHIGAN

Sealed Power Piston Rings

BEST FOR RE-RING! BEST FOR RE-BORE!

Sealed Power Motor Parts—The Heart of the Engine - Rings, Pistons, Pins, Sleeves, Valves, Water Pumps



At Your Service

TIMELY NOTES ON MAINTENANCE AND OPERATION
by MURRAY SIMKINS Managing Editor

High Charge Rate

DON'T LET "excessive charge rate" throw you for a loss when you get into electrical jobs. This doesn't necessarily mean a defective regulator. Before you blame the regulator start the engine and set it at a high idle rate with all electrical accessories turned on. Connect a voltmeter between the B terminal of the regulator and the ground terminal. If you get a reading of 7.0 to 7.7 volts, the regulator is OK.

Now, if you get more than 7.7 volts on this reading, slip a jumper between the regulator base and a good ground. If the voltmeter shows a correct reading the trouble is in the ground. But if the reading is still too high, check up on the engine ground. Be sure that the engine is properly grounded to the chassis. If this is OK, check for trouble at the generator or in the wiring. This is done by disconnecting the wire from the F terminal of the regulator with the engine running. If the voltage stays high, there is either a grounded field coil or grounded wire between the generator and regulator. If the voltage is still high, the next step is to check the regulator setting. If this is necessary, be sure to use the maker's manual and keep to specifications.

On Lighting Safety

VAL ROPER of GE says: You can increase your chances of survival while driving at night by increasing your effective seeing distance. The new, improved sealed beam headlamps reduce uncontrolled upward light which causes that blinding "glare" when reflected by rain, fog, dust, and snow. They give about 25 per cent more light on both driving and passing beams. They produce about twice as much light near the top of the passing beam on the right side of the road. This permits one to see up to 80 ft farther in clear weather. Because of a special design and the precise location of a

shield over the passing beam filament, no useful light from the driving beam is blocked out. And the contrast between the beam of light and the blackness of night is softened for greater eye comfort.

But make certain they are correctly aimed. If headlamps are out of adjustment by as much as one half of one degree, they will be misaimed five feet at a distance of 600 ft ahead. The upper beams of properly aimed, new improved sealed beam headlamps project approximately 65,000 beam candlepower toward the lane of travel far ahead. But again, the mis-aim of headlamps by one half of one degree would cut the beam candlepower far ahead to about 30,000 or half the maximum value of the beam.

Use Oversize Rocker Arm Studs

ROCKER ARMS which must be replaced on the Chevrolet V-8 engine for any reason require the installation of oversize replacement studs. These studs are available in .003 and .013 in oversizes.

Spark Plug Life

AS OUTLINED in Ethyl Technical Notes, factors affecting spark plug operation include the design and condition of the ignition system and spark plug, engine design, and engine-operating conditions. Most of these factors are beyond the control of the owner or serviceman. However, certain precautions will help to assure dependable spark plug operation. These include selection of spark plugs of the correct reach and of the most favorable heat range for the engine operating conditions normally encountered; periodic regapping and reconditioning of the plug electrodes; proper installation of the plug; maintenance of the distributor, including the condenser and the breaker-point surface and gap; checking of the ignition coil

(TURN TO NEXT PAGE, PLEASE)



At Your Service

Continued from Page 9

for proper performance; and inspection of the high-tension leads for faulty insulation or inadequate spacing.

What's With Fuel Injection

VINCENT and Schwartz discussed the future of fuel injection at a recent SAE meeting, listed the following advantages of fuel injection: improvements in power output, fuel economy, acceleration, fuel distribution and reduced costs.

Increased power and economies only add up to 5 to 10 per cent, the authors stated—not a large contribution when the inherent difficulties of the system are considered. Injection, however, by injecting the fuel directly into the hot cylinder, may permit the use of fuel of

lower octane than would otherwise be required. Improved acceleration comes from the fact that the fuel is added directly to the cylinder instantaneously with the throttle change. Thus a manifold volume does not have to be filled with a new mixture ratio.

Good distribution arises from the metering principle and the injection of the fuel to the cylinder. However, perfect distribution does not guarantee improvement since air is also required for proper combustion. Thus a manifold giving poor air distribution to the cylinders cannot be offset by a good fuel injector.

The problem of cost is a prime factor. In the past the fuel injector cost more than a carburetor, though today with complicated carburetors the competition is narrowed. The authors concluded that in view of the advantages, the fuel injector might eventually become practical for gasoline engines.

2-Speed Rear Axle Shift

STUDEBAKER says that a few 2E Series Trucks with a 2-speed rear axle were produced with the overtravel rod and the overtravel rod spring stop spacer too long. When a condition of this kind is present, the axle cannot be shifted into low gear or it will jump out of gear when a load is applied. The correction for this condition is to check the overtravel rod and

(TURN TO PAGE 12, PLEASE)

INCREASE YOUR

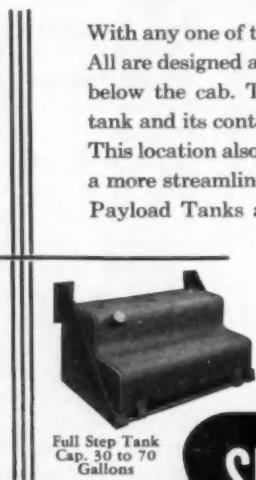
PAYOUT!



Payload Tank
(Back Step)
Cap. 50 to 70
Gallons



Payload Tank
(Corner Step)
Cap. 44 to 64
Gallons



Full Step Tank
Cap. 30 to 70
Gallons

With any one of the three Snyder Safety Payload Tanks illustrated. All are designed and engineered to be mounted to the frame directly below the cab. This position transfers most of the weight of the tank and its contents forward to the front axle, thus more payload. This location also eliminates the apron and running board, effecting a more streamlined appearance. Like all Snyder Safety Tanks, the Payload Tanks are approved by Underwriters Laboratories, Inc.

label or reexamining services and also meet the specification of the Bureau of Motor Carriers of the I.C.C. The Payload Tanks also carry a Snyder Factory Guarantee for one year.

Underwriters Laboratories, Inc.
INSPECTED

SNYDER SAFETY TANKS

SNYDER TANK CORPORATION

P. O. BOX 14, BUFFALO 5, N. Y.
P. O. BOX 2390, BIRMINGHAM 1, ALA.

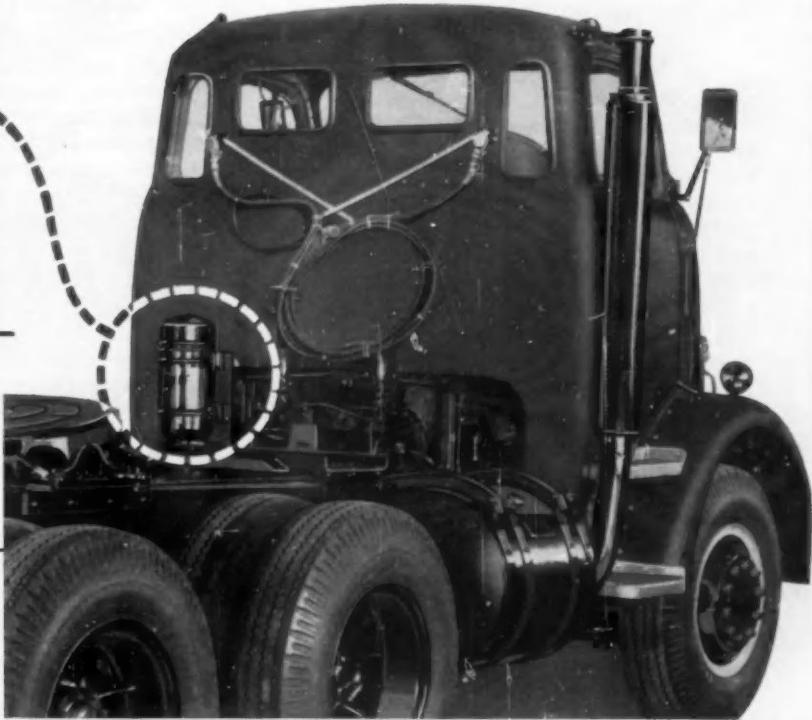
NEW AC

CUSTOM PACK OIL FILTER ELEMENT for the
"BIG BOYS"
OF THE TRUCKING INDUSTRY



AC CUSTOM PACK
FILTER ELEMENT C-267X

for installation shown on
GMC Model DFWX 952-67



NEW AC CUSTOM PACK FILTER MATERIAL SETS NEW STANDARDS of EFFICIENCY

Operators and maintenance officials of bus and truck fleets can now have better protection for units on which they use the single heavy-duty-type filter shown above. AC filtration engineers have developed a new and superior filter element of densely compacted homogeneous, fibrous materials. These ingredients are specially processed to give more effective filtration over longer operating periods.

AC SPARK PLUG THE ELECTRONICS
THE ELECTRONICS
DIVISION OF
GENERAL MOTORS

YOU NOW GET PREMIUM FILTER PERFORMANCE WITHOUT PAYING A PREMIUM PRICE!

AC road-test and laboratory-test results show a much higher standard of filtration performance for this new filter element. It is impressively above mileage or operation-hours usually experienced with depth-type filters. This means that the AC Custom Pack Filter Element offers you an operative safety margin well beyond filter-change frequencies customary in heavy-duty hauling. There is no price penalty for this superior product — and it's available now from your regular AC supplier.



At Your Service

Continued from Page 10

the overtravel rod spring stop spacer for proper length. The correct overtravel rod (Part No. 678267) is 5 19/32 in. long. The correct overtravel rod spring stop spacer (Part No. 678264) is 5/8 in. long. The two incorrect parts will always be found together.

IHC Automatic Transmission

A NEW AUTOMATIC transmission with smoother shifting at all speeds is now available in 16 International truck models from 4200 to 12,500 lb GVW. These models are included in eight light- and medium-duty International series—the S-100, S-110, S-120, S-130, and S-150; and SM-120, SM-130, and SM-150 with Metro Bodies—and can be secured with pickup, panel, stake, Travelall, service utility, van, and multi-stop delivery bodies.

COLE-HERSEE QUALITY ELECTRICAL PRODUCTS

FOR EVERY BUS AND TRUCK

DESIGNED TO CARRY THE HEAVIEST LOADS UNDER THE TOUGHEST CONDITIONS

Fleet operators everywhere recognize and ask for Cole-Hersee electrical products because they know the name Cole-Hersee means quality and dependability. Cole-Hersee units are designed and engineered to meet the higher voltages, heavier loads and tougher service encountered in commercial use.

Cole-Hersee truck and bus products are carried by leading jobbers everywhere. Specify Cole-Hersee for the safest, most dependable, long-lasting electrical products you can buy.

All three forward speeds of the planetary transmission are hydraulically controlled and fully automatic. The reverse gear is shifted manually on the selector. The ratios are 1 to 1 in high, 1.467 to 1 in second, 2.47 to 1 in low, and 2 to 1 in reverse. Combined with the transmission is a new torque converter which multiplies engine torque as much as 2.16 to 1.

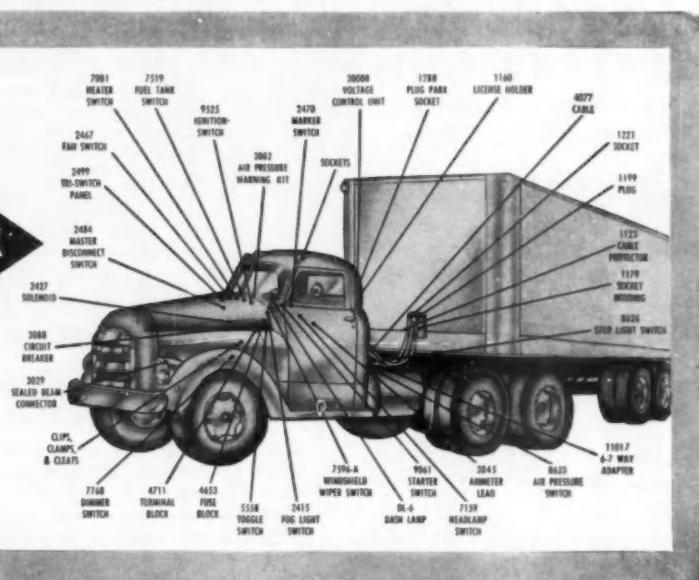
Painting School Opens

DEVILBISS COMPANY'S School of Spray Finishing Technique opens again April 9 at Toledo, Ohio. A one-week course will be conducted at that time for those using or handling DeVilbiss equipment. Another course starts June 25.

Studebaker's Non-Slip Differential

STUDEBAKER'S half-ton truck is now available with a non-slip differential as factory-installed equipment. This "Twin Traction" differential divides the driving power or engine torque between the rear wheels in a way that is directly opposite to conventional differentials. The major engine driving force is transmitted to whichever wheel has the best traction as compared to a conventional differential which lets the power go to the rear wheel with the least traction.

(TURN TO PAGE 14, PLEASE)



These are only representative items. See our catalog for the complete line.

SEND FOR THE COLE-HERSEE TRUCK AND BUS CATALOG D-188.



COLE-HERSEE

Over 40 Years of Consistently Better Products

20 OLD COLONY AVENUE, BOSTON 27, MASS.

OUT OUR WAY

by J. R. Williams



EXTRA MILEAGE AT NO EXTRA COST

Lee Super DeLuxe Highway Tire is built to take extra recaps, too!

Here is a regular-price truck tire that is making original mileage and recap records all over the country.

The Lee Super DeLuxe Highway has a wide, flat-contour tread compounded of best-grade Smoked Sheet natural rubber for maximum mileage. The tread design provides excellent traction and is so devised as to prevent small cuts from growing into long tread cracks.

The carcass has Lee's special Lubri-Cushions—thin sheets of rubber between every ply. They lubricate the plies, reduce internal friction, and protect against bruise breaks by equalizing flexing strain over the entire road impact area. The

cords are all treated by the exclusive Lee Flexlok Process, which minimizes tire growth and makes cord separation from the rubber bond practically impossible.

Available in Double-Life rayon or nylon cord, the Lee Super DeLuxe Highway is an outstanding truck tire buy. Write, wire or phone today for full information.

* * * *

Lee makes the complete line of over-the-road and special service truck tires shown below. One of these tires will lower your operating costs by giving longer life, more recaps. Let us prove it to you.

Super Deluxe Highway

Extra Tread S-Rib

Mud & Snow Commercial

Cleat-Rib

Rural Service — Logger

Cleated Tread

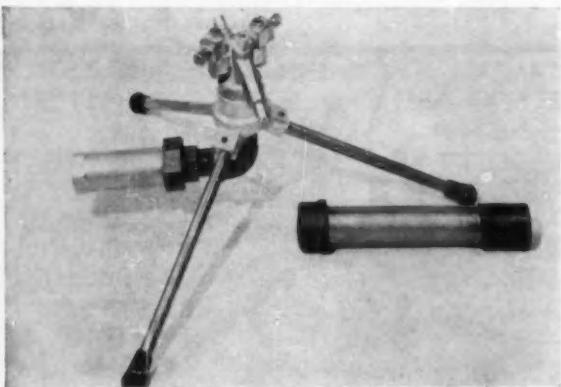
Deep-Cleat



LEE RUBBER & TIRE CORPORATION



CONSHOHOCKEN, PA.



NEW Rotary Sprayer Simplifies Cleaning of Tank Truck Interiors

NO NEED TO CRAWL inside hot, slippery foul-smelling tank trucks to brush and hose-rinse them clean. Now, with the Oakite Rotary Sprayer, you can cut cleaning time 75%; stop rinse water waste; reduce cleaning costs.

Revolving Solution-Sprays Clean and Rinse

The Oakite Rotary Sprayer consists of a small rotating head fitted with six wide-angled flat spray nozzles. It may be positioned on tank truck bottom, tripod supported. Or clamped to manhole and suspended from tank top. Cleaning and rinsing are accomplished by simple valve manipulation.

Send for Complete Information

All information, including low rental arrangement, plus helpful drawing and specification sheet gladly supplied FREE on request. Oakite Products, Inc., 26D Rector Street, New York 6, New York.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada



At Your Service

Continued from Page 12

Use HD Oils for Diamond T

HEAVY DUTY detergent type engine oils are now specified for all engines used in Diamond T trucks. Earlier specifications recommended a straight type mineral oil for break-in of the new or rebuilt XL series. According to Diamond T the straight mineral type oil is of doubtful value during the break-in period.

Engine Test Training

REGISTRATIONS at Sun Electric Corp.'s Technical Training School in 1956 are running over 100 per cent ahead of registrations for the same period in 1955, says W. W. Squier, head of the school. Sun's course is offered in four, one-week units, covers test equipment operation, automotive electricity, modern tune-up procedures and service merchandising. Day classes start on the first Monday of each month and evening classes are open to local students four nights a week.

What's New

The Strick Co. has developed an experimental new 2-in. deep king-pin sub-frame in another step towards the development of the optimum maximum cube trailer. The average shallow king-pin structure is supported by 5-in. cross members. By reducing the depth of these cross members to 2 in., Strick engineers have been able to add at least 3 in. of inside height throughout a trailer. The addition in height results in a gain of about 70 cu ft of cargo capacity.

General Electric has come to the aid of ear-weary truck drivers and other two-way radio users by removing the distracting chatter of radio calls intended for others. Simple electronic tone selecting equipment in standard two-way radios turns the mobile radio receivers on individually, thus allowing a dispatcher to communicate with any radio-equipped car or truck without bothering all other radio-equipped vehicles in the network.



"CHAMPIONS helped us do an emergency winter logging job that would have stumped Paul Bunyan"



says Master Mechanic John Zagelow of Bovill,
Idaho's Potlatch Forests, Inc., which fights 15-ft. snowdrifts
and "47 below" cold to get out the timber.

"Beetles threatened to ruin 300 million feet of valuable spruce. Only 'hot logging'—rapid year-round operation—could save that timber," says Master Mechanic John Zagelow, in charge of Potlatch Forests' power equipment at Bovill, Idaho.

"We started full-scale winter operations, 'dozing roads through 15-foot snowdrifts. Men and equipment worked even at 47° below, losing only one and one-half days all winter.

"At our base for this show we now have 27 Mack EY707 logging trucks and a fleet of Chevrolet utility trucks, all Champion-equipped. Our diesels have small gasoline engines for starting—and Champions help them turn over winter or summer. In fact, every gasoline engine we use is fired by Champions."

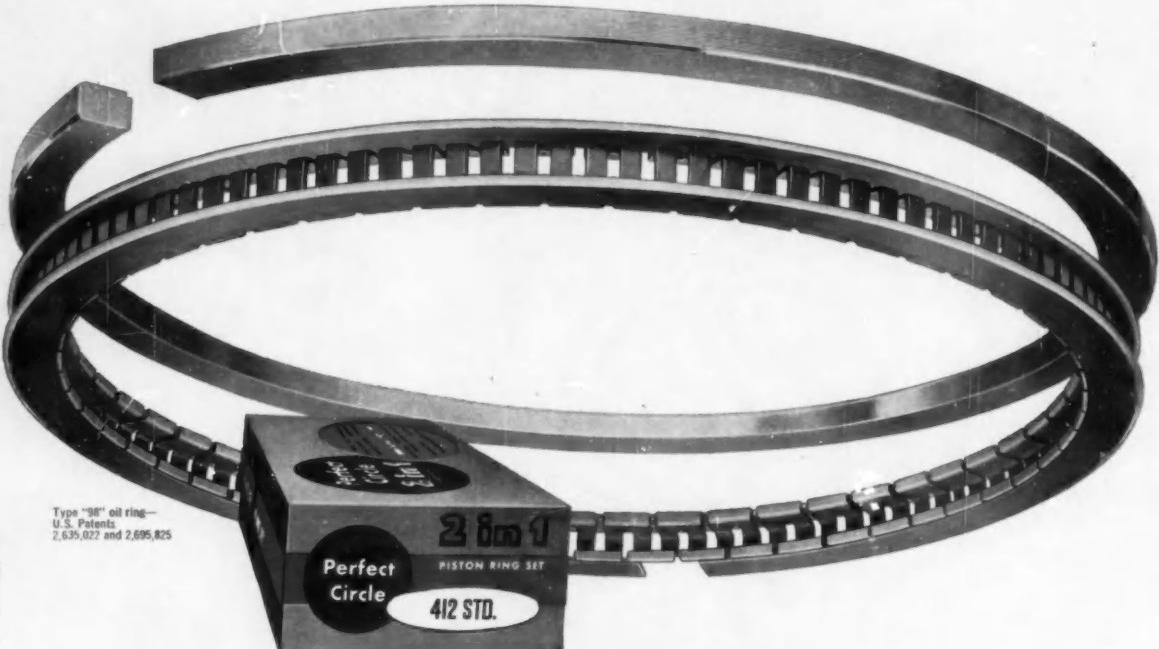
Helping Potlatch Forests bring out 750,000 feet of timber every day is a tough test for spark plugs. Champions proved themselves tops for efficiency, dependability and economy, just as they will for you. Next time you change plugs, change to full-firing, 5-rib Champions.



CHAMPION

SPARK PLUGS

CHAMPION SPARK PLUG COMPANY • TOLEDO 1, OHIO



COMPARE

for features that mean **PERFORMANCE**

*Perfect Circle 2-in-1 chrome set with the
New type "98" chrome oil ring*

- Top compression ring is specially designed to perform where pressures are greatest, heat is highest, lubrication is poorest.
- Type "98" chrome oil ring with self-expanding spacer assures uniform seal against cylinder wall. And it provides a positive side sealing action on the ring groove. More than half of all passenger

cars produced in the U.S. in 1955 were equipped with Perfect Circle Type "98" chrome oil rings.

- Both rings are plated with thick, solid chrome that resists wear, more than doubles the life of cylinders, pistons and rings. Means thousands of extra miles of positive oil control and sustained power—what every car owner wants!

Perfect Circle
piston rings

The standard of comparison

Perfect Circle Corporation, Hagerstown, Indiana; The Perfect Circle Co., Ltd., Toronto, Ontario.



UP FRONT

WITH CCJ

MARCH, 1956, FLEET HIGHLIGHTS AS REPORTED BY COMMERCIAL CAR JOURNAL

MR. EXECUTIVE,

In its annual report to Congress, the Interstate Commerce Commission recommended 39 changes in the Interstate Commerce Act, including two highly controversial proposals. It wants all trucks subject to the ICC's hours of service and safety regulations to be registered. This would include private carriers, agricultural haulers, local carriers in commercial zones and carriers operating in foreign commerce between points in a foreign country through the United States. In respect to contract carriers, the ICC (1) wants authority to limit "the person or persons and number or class of persons" for which a contract carrier may provide service, and (2) asks that contract carrier permits be limited to instances where existing common carriers are unwilling or unable to provide the "service for which a need has been shown."

CARRIERS INVOLVED

Trucking Assns. Contract Carrier Conference, said the proposed limitations would completely change contract carriage as it is known today, added that they "would make it impossible, from a practical point of view, for new contract carrier authority to be issued." Late last month, ATA's Private Carrier Conference was debating an official stand on the proposal to register private carriers. The Conference noted divided opinion among its members—some for it, others against it, and raised the question whether the registration could be turned into an ICC private carriage permit that could subsequently be revoked?

EMERGENCY BRAKE

regulations were the subject of a meeting early last month attended by representatives of the ICC, ATA, Truck-Trailer Manufacturers Assn. and Automobile Manufacturers Assn. As a result of the meeting, it seems probable that (1) the original emergency brake regulations will be postponed until after a series of tests by the Bureau of Public Roads, and (2) ICC will issue interim regs about the middle of this month. Truck operators have until April 3 to send their comment on the brake regs to ICC. (For further comment, see page 108, this issue.)

TRANSPORT POLICY

revision could be a dead issue insofar as this session of Congress is concerned. Senate Interstate Commerce Committee has not scheduled any hearings on the proposals, S1920, up to March 28, when it is expected the Senate will recess for Easter until April 9. Upon its return, the Senate will not be likely to start new controversial legislation through the mill. The Senators will aim toward cleaning up pending matters, looking to an early adjournment so they can do some campaigning before the fall elections.

DETROIT DISPATCH

AUTOMATIC TRANSMISSION FOR heavy-duty trucks has been developed by Borg-Warner. The 8-speed unit is currently being tested by an important truck maker. BW's Ford-O-Matic-type 3-speed automatic transmission has been adopted as optional equipment for lighter trucks by a major truck builder.

TYPE C AUTOMATIC transmission fluid does not replace the SAE standard Type A in automatic transmissions. Type C was developed by Allison Division of GM and, at present, is only recommended by the Division for some of its heavy duty torque converters (see page 166, this issue).

ATOM-FUELED POWER units to pull a string of trailers over roadless areas are being investigated by the Army.

Nuclear Development Corp. of America has a contract to investigate if such tractors are possible.

FUEL INJECTION SYSTEMS ARE expected on one or two high-priced automobiles next year but do not appear to be in the cards for trucks for another year or two, at least. Experimental work on truck fuel injection is underway, but high cost rules it out for now.

NEW TRUCKS ANNOUNCED include 21 more 1956 Chevrolets, extending the line up to 50,000 lb GCW (page 90, this issue), and a series of COE, 4-wheel drive trucks by FWD with up to 40,000 lb GVW (page 94, this issue).

TRUCK BUYERS, ESPECIALLY some municipalities and private carriers, don't always get the advantages of

WASHINGTON RUNAROUND

INTERSTATE COMMERCE Commission has postponed the effective date of its 30-day minimum leasing rule until July 1, 1956.

ATA FOUNDATION HAS received \$50,000 from Goodyear Tire & Rubber Co., renewing the company's Foundation membership for 1956. Money will be used for a series of three ads promoting better highways to appear in Saturday Evening Post (March 3), Life (March 26) and Colliers (March 30).

TRAILERSHIP TERMINAL design plans have been asked for by the Maritime Administration. It's interested from a national defense viewpoint. Meanwhile, McLean's Pan-Atlantic Steamship Corp. plans to start coastwise "fishy-back" first of next month (see page 76, this issue).

TEAMSTERS CAN picket New York, New Haven & Hartford Railroad's piggy-back loading operations at least until the National Labor Relations Board makes a decision, says the U. S. Supreme Court. The case was appealed from a Massachusetts Supreme Court ruling that affirmed a permanent

anti-picketing injunction granted by a lower state court. Said the U. S. Supreme Court, jurisdiction of the NLRB in this matter is exclusive and the New Haven will have to seek relief from that agency.

FEES PAID FOR rental or lease of a bus when lessor does not furnish driver and bus is driven by lessee or his employee does not constitute an amount paid for transportation of persons and therefore is not subject to transportation tax, says Internal Revenue Service.

TANK TRUCK CENSUS, undertaken by the National Petroleum Council, is finished. The study shows 36,076 tank trucks, semi-trailers and full trailers in general and special use, including 31,012 general purpose units, 3077 LP gas units and 1987 chemical units. General purpose tanks are split 16,046 for-hire and 14,966 private, LP gas units divide 977 for-hire and 2100 private and chemical tanks total 1671 for-hire and 316 private.

EXEMPT AGRICULTURAL haulers have two organizations interested in them. The Growers and Shippers League of

GENERAL FREIGHT

latest advances in truck design, says a leading truck engineer. He comments that they tend to specify familiar components rather than commercially-proved newer ones. He suggests that they should specify requirements such as load, speed, gradability, operating conditions, etc., and then let the maker supply the right truck for the requirements and warrant its operation.

PLASTIC TRAILERS STILL seem to be out of bounds on cost. Most models built are experimental or for where plastic's characteristics are an advantage. Increased use of fiber glass reinforced plastic can be expected for various trailer components. Latest is a reefer trailer door of laminated layers of plywood, fiber glass and plastic insulation. It is said to be lighter and less costly than insulated metal doors.

INTERCITY general freight transported by truck during 1955 was up 13.7 per cent over 1954, reports ATA's Research Dept. For December, 1955, the gain was 11.9 per cent over December, 1954. As compared to November, 1955, there was a 6.3 per cent drop in December, 1955. The unadjusted figures, based on a special survey of about one-third of all Class I intercity common carriers of general freight, showed the greatest gain for the year in the Central region—18.9 per cent as compared to 1954. Next highest were the Southern and Northwestern regions, each with a 15 per cent gain over 1954. Despite two major strikes, gains were registered in all regions.

Month	% Change from Previous Month	% Change from a Year Ago
12 Months, 1955	+13.7
December, 1955	- 6.3	+11.9
November, 1955	- 0.9	+17.0
October, 1955	+ 1.5	+19.2
9 Months, 1955	+14.0
September, 1955	+ 1.2	+17.7
August, 1955	+21.3	+20.9
July, 1955	-11.6	+ 8.7
8 Months, 1955	+14.2
June, 1955	- 0.9	+13.2
May, 1955	+ 0.2	+22.6
April, 1955	- 5.0	+13.0
3 Months, 1955	+12.2
March, 1955	+17.0	+13.0

IN THIS ISSUE . . .

Florida is discussing a tentative proposal whereby they would be required to register with the ICC and show proof of having cargo insurance in order to trip lease. Meanwhile, these carriers are being invited to join the National Agricultural Transportation League so as to form an effective organization for national representation.

PUBLIC STOCK financing is growing among larger common carrier trucking companies says B. M. Seymour, president of Associated Transport. However, he notes that fewer than 50 of the some 200 Class I intercity motor carriers have taken advantage of this method of financing.

ANTI-TRUST SUIT BY Pennsylvania Motor Truck Assn. against the eastern railroads hit the headlines late last month. Sonya Saroyan, a former employee of the railroad's public relations firm and a key witness for the truckers in pre-trial hearings, wrote a letter to the federal district judge, said that the truckers had failed to pay her \$25,000 as promised. Counsel for the truckers promptly denied that such an offer had been made.

MAINTENANCE-minded fleet operators will find plenty of food for thought in a report on how one **BUS** fleet gets a positive **ANALYSIS OF ENGINE CONDITION** with a 20-minute check on the GM diesel (page 66). Also there's a **TWO-WAY RADIO PM** program (page 74), and Inland Motor Freight tells how it cuts **TIRE COSTS** (page 92).

SHOP EQUIPMENT for better maintenance is featured in four pages of pictures of **MECHANIC-DESIGNED TOOLS** from Super Service Motor Freight (page 70), along with a concise summary of how to get the most from **JACKS** in shop work (page 100).

VEHICLE COMPONENTS that may speed your operation are reviewed in a round-up of **AIR CONDITIONING** equipment (page 80), in a discussion of molecular-bonded **BI-METALLIC PISTONS** (page 82), in a description of Fuller's new 10-speed **TRANSMISSION** that eliminates need for split-shifting (page 96), and in a story from Detroit Creamery on refrigerating with a **TRAILER LIVE AXLE** drive (page 98).

The Road Ahead



TRUCK TAX

of \$1.50 per 1000 lb per year for vehicles over 26,000 lb is included in HR 9075 as approved by the House Ways and Means Committee. Other increases included bring the level of federal highway-use taxes to 3¢ per gal on motor fuels, 8¢ per lb on tires, 5¢ per lb on tubes, 3¢ per lb on camelback used in retreading and 10 per cent on new trucks, buses, passenger cars and parts. The measure is designed to pay for the expanded federal-aid highway building program proposed in HR 8836, now under consideration by the House Public Works Committee (Feb., page 20).

EXEMPTION FROM the 1¢ per gal increase in motor fuel tax is proposed for non-highway use and for urban transit operating at least 95 per cent of fixed route mileage within a single commercial zone. Non-highway vehicles would also be exempt from the camelback tax. Under study is possible extension of the fuel tax exemption so as to cover the greatest number of local transit fleets.

"ANTI-DIVERSION" IS proposed in the bill. A trust fund would be established in the U. S. Treasury (similar to present Social Security tax handling) into which would be put all revenue from the tax **increases** in HR 9075 plus **all** motor fuel taxes beginning July 1, 1956. To this would be added on July 1, 1957, the present 5¢ per lb on tires and tubes. This fund would be ear-marked solely for federal-aid highway construction.

AMERICAN TRUCKING ASSNS., before addition of the truck weight tax, gave the proposed tax boosts its "unequivocal support." National Assn. of Motorbus Operators gave support to the principle of across-the-board tax increases but warned that the increases would place a severe burden on the intercity bus industry. American Transit Assn. requested the committee to exempt local transit fleets from increases in taxes on tires, retreads and new vehicles and to widen the operating area subject to the fuel tax increase exemption.

AMERICAN AUTOMOBILE ASSN. continued to push for its own highway program and soak-the-heavy-trucks tax proposal (Feb., page 20). It attacked HR 9075 both in committee hearings and publicly. Given national distribution was a four-page folder entitled, "Why Heavy Trucks Should Pay Higher Tax Rates" (see page 5, this issue). At press time, at least two state truck associations were bringing to their members, attention "grass roots" campaigns by local AAA clubs to support a heavy truck tax differential in HR 9075.

* * *

PRELIMINARY PRODUCTION figures for the 12 months of 1955 are given below. Complete data, including comparison with previous years, will appear in the special statistical section of next month's Fleet Operators Reference Annual.

In thousands of units, except bus sales are in actual numbers	Truck* and Bus Tires								Inventory End of Dec.				
	New Truck Registrations		Truck Factory Sales—Domestic		Truck Trailer Shipments		Bus Factory Sales—Domestic						
	Dec.	12 Months	Dec.	12 Months	Dec.	12 Months	Dec.	12 Months					
1955	93.7	957.0	86.9	1032.7	7.0	76.3	406	3980	552.0	9056.8	404.0	4800.3	2815.3
1954	69.8	829.1	79.8	843.5	4.8	54.6	337	3782	625.4	8111.0	324.5	3901.2	2544.7

FOLLOW THE LEAD of Mileage-Minded Truckers

SWITCH TO

Proved over Billions of Bonus Miles



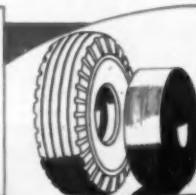
QUALIFIED INSPECTION
Answers you that your
tire can be recapped
safely!



ACCURATE BUFFING
Precision buffing creates
better adhesion of new
tread to tire body.



EXPERT BALANCING
This alone means up to
25% more mileage.



NEW TIRE RUBBER
The same high quality
rubber used in the new
General tire.

KRAFT
SYSTEM
RECAPPING
A GENERAL TIRE SERVICE

There's an old saying, "Never buck a trend," and the trend today among successful truck fleet operators is to KRAFT System Recapping for guaranteed bonus mileage. It's the one business-like, factory-controlled system that can be depended on from coast to coast... can be counted on to get every last profit-mile out of your tires. Follow the leaders and call your General Tire Distributor for every service and recapping need. You'll like the way he takes over your problem.

Kraft's Exclusive Big Four

- Extra-long mileage, top-quality materials
- Factory-approved equipment
- Factory-trained recappers
- Guaranteed service

**KRAFT SYSTEM
RECAPPING IS
AUTHORIZED
ONLY BY THE
GENERAL
TIRE & RUBBER
COMPANY**



BOGGED DOWN BY BREAKDOWNS?

Chances are your Socony Mobil Representative
can help you find the cause—and prescribe the cure!

A daily line-up of cripples in your maintenance department can be a real headache. They can make your profit column look mighty sick, too. So, if you're bogged down by breakdowns, you need a *specialist*—your Socony Mobil representative.

He is backed by Socony Mobil's 90 years of experience . . . its vast research facilities . . . the largest staff of lubrication engineers in the industry . . . a complete line of top-quality oils and greases.

Using this background, he'll help you find the cause of your trouble—prescribe the cure. He'll make an analysis of your entire fleet . . . set up lubrication schedules . . . recommend the right lubricants for every unit . . . advise on correct application. And when necessary, he will provide the services of skilled engineers.

* * *

To keep your fleet healthy and *on the road*, call your Socony Mobil representative.



CORRECT LUBRICATION FOR FLEET OPERATORS

THE FLYING RED HORSE COMPANIES: SOCONY MOBIL OIL CO., INC.

MAGNOLIA PETROLEUM CO., GENERAL PETROLEUM CORP.

DATES and DOINGS

MARCH

22-24—Colorado Motor Carriers Assn., Annual Meeting, Cosmopolitan Hotel, Denver, Colo.
26-27—Annual Texas Safety Conference, Baker Hotel, Dallas, Texas.

APRIL

8-10—Western Highway Institute, Annual Meeting, El Mirador Hotel, Palm Springs, Calif.
11-12—American Traction Assn., Region V Conference, Hotel Lassen, Wichita, Kan.
11-12—Midwesten Shipper-Motor Carrier Conference, Kentwood Arms Hotel, Springfield, Mo.
11-14—Middle Atlantic Regional Automotive Show, Commercial Museum, Philadelphia, Pa.
16-18—American Transit Assn., Region VII Conference, Palace Hotel, San Francisco, Cal.
16-20—Annual Safety Convention and Exposition, Hotel Statler, New York, N. Y.
20-21—Alabama Trucking Assn., Annual Meeting, Hotel Admiral Semmes, Mobile, Ala.

20-22—New Jersey Motor Truck Assn., Annual Convention, Hotel Berkeley Carteret, Asbury Park, N. J.
22-26—National Tank Truck Carriers, American Trucking Assns., Shoreham Hotel, Washington, D. C.
26—Maine Truck Owners Assn., Annual Meeting, Hotel Lafayette, Portland, Me.
28-May 6—International Automobile Show, New York City Coliseum, New York, N. Y.
29-May 3—Operations Council, American Trucking Assns., Annual Meeting, Sheraton-Cadillac Hotel, Detroit, Mich.
30-May 2—Chamber of Commerce of the U. S., Annual Meeting, Washington, D. C.

MAY

2-4—American Transit Assn., Region II Conference, Lord Baltimore Hotel, Baltimore, Md.
2-5—Local Cartage National Conference, American Trucking Assns., Roosevelt Hotel, New Orleans, La.
7-18—American Gas Assn.-Edison Electric Institute, Joint Motor Vehicle Committee Meeting, Congress Hotel, Chicago, Ill.
8-10—National Highway Users Conference, Highway Transportation Congress, Washington, D. C.
8-11—Equipment and Maintenance Council, American Trucking Assns., Spring Meeting, Sheraton Hotel, Chicago, Ill.
8-11—Council of Safety Supervisors, American Trucking Assns., Spring Meeting, Sheraton Hotel, Chicago, Ill.
10-13—Georgia Motor Trucking Assn., Annual Meeting, Hotel General Oglethorpe, Savannah, Ga.
10-13—Southwest Automotive Show, Houston Coliseum, Houston, Texas.
13-19—Regular Common Carrier Conference, American Trucking Assns., Board of Governors Meeting, Edgewater Park, Miss.
20-23—Washington Motor Transport Assn., Annual Meeting, Davenport Hotel, Spokane, Wash.
24—Rhode Island Truck Owners Assn., Annual Meeting, Sheraton-Biltmore Hotel, Providence, R. I.
25-26—Southeast Automotive Show Trade Conference, Asheville, N. C.
26—Maryland Motor Truck Assn., Annual Meeting, Lord Baltimore Hotel, Baltimore, Md.

JUNE

3-6—Automotive Engine Rebuilders Assn., Annual Convention, Hotel Sherman, Chicago, Ill.
3-8—Society of Automotive Engineers, Summer Meeting, Chalfonte-Haddon Hall, Atlantic City, N. J.
7-9—Pennsylvania Motor Truck Assn., Annual Meeting, Penn-Harris Hotel, Harrisburg, Pa.
11-15—National Plastic Exposition (including truck bodies and other automotive components), New York City Coliseum, New York, N. Y.
20-21—Executive Committee, American Trucking Assns., Washington, D. C.

CUT DELIVERY COSTS, REDUCE DAMAGE CLAIMS

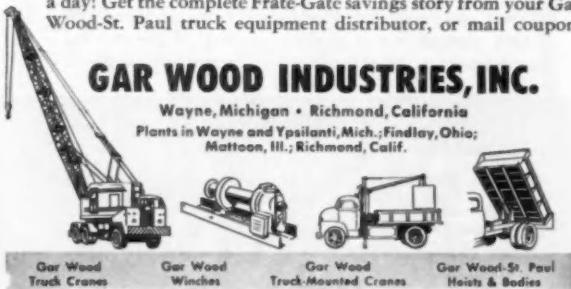
GarWood
-St.Paul-

Frate-Gates

Frate-Gate users report up to 50% savings in cost of wholesale-retail deliveries and special plant material handling. The reason: Frate-Gate's full power operation lets one man lift and lower up to 2000 lbs.; open and close Frate-Gate just by touching a lever. Faster loading and unloading means more deliveries per day without extra help.

Frate-Gates help you reduce both damage and liability claims, too. Smooth hydraulic operation to handle fragile goods gently... a half-dozen safety features for employee protection.

Yet, for all the time, money and back-breaking labor it can save, a Frate-Gate costs surprisingly little—actually less than 50¢ a day! Get the complete Frate-Gate savings story from your Gar Wood-St. Paul truck equipment distributor, or mail coupon.



MAIL FOR COMPLETE INFORMATION

Customer Service Department CCJ-1
Gar Wood Industries, Inc., Wayne, Michigan

Please send me the free savings story on Gar Wood-St. Paul Frate-Gates.

Name _____
Position _____
Company _____
Address _____
City _____ State _____

**Wagner's Rigid
Quality Control**
means
BETTER BRAKES...SAFER TRUCKS

YOU CAN DEPEND



This Wagner inspector deals in fine measurements down to millions of an inch. His comparascope, which

original size, tells him if cylinder bore surfaces are smooth enough for a positive sealing of the rubber cups against cylinder walls when brakes are applied.

Est.
1891

Wagner

*...the best known
name in brake service*

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID... NoRel... CoMoK BRAKE LINING... AIR BRAKES... TACHOGRAPH... ELECTRIC MOTORS

ON WAGNER QUALITY....

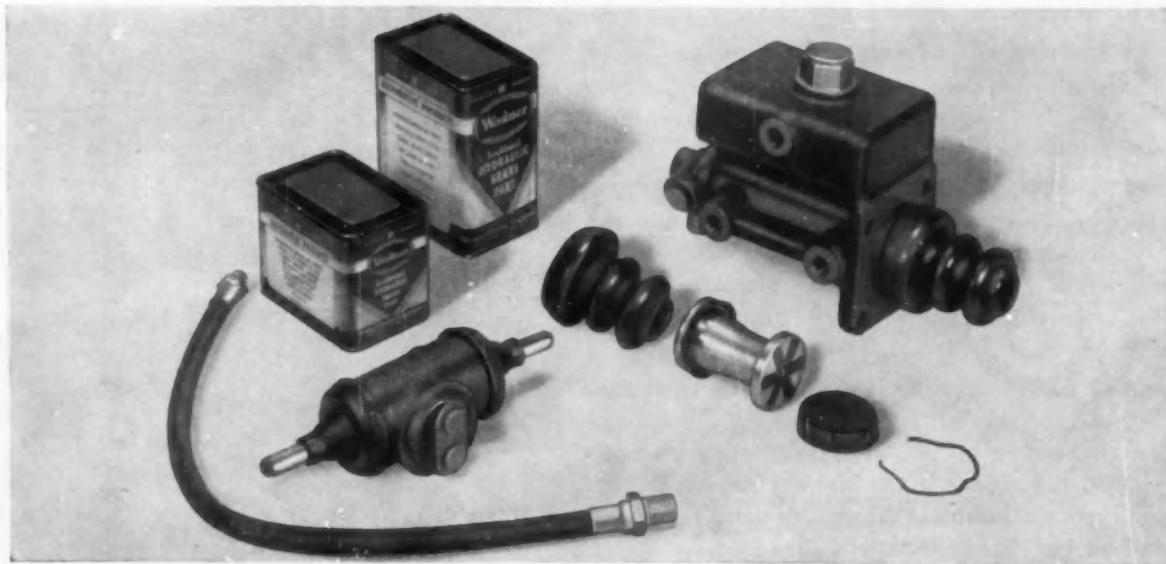
**because Wagner Products are
used as original equipment by car,
bus, truck and trailer manufacturers**

These automotive manufacturers are familiar with Wagner's Rigid Quality Control policy. They know that every Wagner Lockheed Brake Part has been thoroughly tested and inspected for uniformity and dependability.

Engineers call it "quality control." What it means is that Wagner brake experts check and check and check again to make sure that only top quality brake parts ever leave the Wagner plant.

And Wagner does this for only one reason—so that you, like the makers of fine motor cars and trucks, can rely on Wagner for the finest and safest brakes available anywhere.

The Wagner line of hydraulic brake parts is the most complete on the market. Every make and model vehicle is covered. Parts are available individually or in factory sealed kits.



Wagner Electric Corporation

6470 PLYMOUTH AVE., ST. LOUIS 14, MO., U.S.A.
(Branches in principal cities in U.S. and in Canada)

Please send me a free copy of Hydraulic Brake Service
Guide HU-411. I understand that there is no obligation.

NAME _____

FIRM NAME _____

ADDRESS _____

CITY _____

ZONE _____ STATE _____



P56-ID

...TRANSFORMERS ... INDUSTRIAL BRAKES

Greatest power



Here's 1956's grand slam in great advances—
greater values—in GMC's greatest line of
V8 Hydra-Matic Blue Chip trucks!

WE'VE POURED ON THE POWER! Here's the mightiest family of power plants in the truck world. Spectacular new V8's now pack up to 210 h.p. in the shortest stroke over-square engine made. And a 4-barrel carburetor adds flashing new performance AND increased fuel economy to that.

WE'VE TRIMMED OFF WEIGHT! Now—even with added brawn—these heavy-duty Blue Chip GMC's give you hundreds of pounds more payload capacity in place of dead weight.

WE'VE BOOSTED HYDRA-MATIC PERFORMANCE! Now—teaming Hydra-Matic Drive with new 2-speed, wide-range axles—this greatest man-and-money-saver of all works with better axle ratios for superior road pace—greater economies—more freedom from maintenance costs!

WE'VE ADDED NEW EXTRA-CAPACITY TANDEMS! To let you take full advantage of the more liberal weight laws in many states, GMC introduces new tandem-axle models in the highway hauling bracket. And new dual-purpose cab models swing the biggest trailers any state law allows!

AND WE'VE BETTERED THE VALUE! Despite their better-than-ever fine truck features, these 1956 Blue Chip GMC's are now priced below many competitive models. IT IS A FACT: WHILE FAR AHEAD ON SPECIFICATIONS, THEY'LL COST YOU LESS THAN THE RUNNERS-UP!



See your GMC Dealer!

GMC TRUCK & COACH—A General Motors Division

team per dollar



IN MOTOR TRANSPORT

GMC

LEADS THE WAY

Heavy-duty GMC's range from 38,000 to 90,000 GCW. Also available with 6-cylinder gasoline engines, with Diesel power and with Synchro-Mesh transmissions. Model shown here is the 550, rated at 50,000 GCW. Also with tandem axle for off-highway and construction work; with conventional or close-coupled cab.

"We wanted the best air brake equipment available..."

Our decision was

Wagner Air Brakes

says: C. H. Rose, Fleet Maintenance Superintendent
East Texas Motor Freight Lines, Dallas, Texas



EAST TEXAS MOTOR FREIGHT LINES
GENERAL OFFICES - DALLAS, TEXAS
4620 N. MARYMOOR DRIVE

Wagner Electric Corporation
6400 Plymouth Avenue
St. Louis 14, Missouri
Attention: General Sales Manager

Dear Sir:
Approximately three years ago our company realized the ever-increasing need of having equally as good, if not better, brakes on the small two-ton city tractor-poor equipment as we normally have on the regular line haul, over-the-road equipment. This meant that it would be necessary for these units to be equipped with air over hydraulic equipment. Knowing that the cost of equipping 120 small tractors which are used in the city for moving heavily loaded trailers through traffic, was going to entail a large expenditure, we quite naturally wanted to select the best air brake equipment available. Our decision then, and still is, Wagner brake equipment.

The longevity and dependability of Wagner brake air kits are attested to by the fact that during the year of 1954 we traded in 51 of the older city tractors on new units and due to the excellent condition of the air kits on the old tractors, we had the dealers transfer them to the new tractors.

During the past few months we have added additional new tractors equipped with units with Wagner. Some of the tractors were equipped in our own shop, and, of course, wanting this particular group of trucks to be standard, or course, wanting this particularly, they too had new Wagner air kits installed on them. Approximately 40% of our over-the-road line haul tractors are equipped with Wagner compressors, etc., and we find they, like our city tractors, are operating very satisfactorily, safe and economically.

Yours very truly,
EAST TEXAS MOTOR FREIGHT

C. H. Rose
C. H. Rose
Fleet Maintenance Superintendent



Wagner Electric Corporation

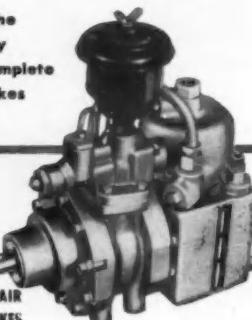
6470 PLYMOUTH AVENUE • ST. LOUIS 14, MO., U.S.A.

(Branches in Principal Cities in U. S. and in Canada)

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID... NeRel... CoMoX BRAKE LINING... AIR BRAKES... TACHOGRAPH... ELECTRIC MOTORS... TRANSFORMERS... INDUSTRIAL BRAKES

Nothing beats the
controlled safety
protection of complete
Wagner Air Brakes

K56-3



The Engineer's Field Report

CASE HISTORY

RPM Delo Oils

LUBRICANT

Alaska Freight Lines
FIRM Seattle, Washington

RPM DELO Oil protects engines of huge Arctic Sno-Freighter— even at 68° below zero



ALASKA FREIGHT LINES uses RPM DELO Oil in engines of this huge LeTourneau Sno-Freighter for operations on the first overland supply route to the Arctic Ocean. During winter months, when temperatures fall to 68° below zero, the two 400 hp. Cummins diesels run 24 hours a day to prevent freezing. After a year of such service, crew members report RPM DELO Supercharged-1 Lubricating Oil proved completely satisfactory for all weather and performance conditions.

Using "RPM" and "RPM DELO" lubricants, exclusively supplied on the job, giant six-car train hauls 200-ton loads over 600 miles of frozen tundra from Circle, Alaska, to the Beaufort

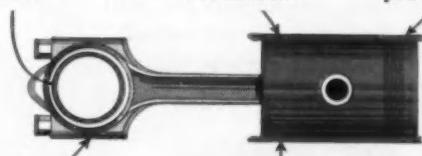
Sea. Decks of Sno-Freighter are 8½ feet off the ground, with all cars waterproofed to a height of six feet for fording streams. Engines drive generators which supply current to electric motors inside each of the 24 wheels. Operator steers only two front wheels; each unit automatically tracks car ahead.

Why RPM DELO Oils prolong engine life

Special com-
pounds stop
corrosion

Anti-oxidant
resists lacquer
formation

Detergent keeps all
parts clean



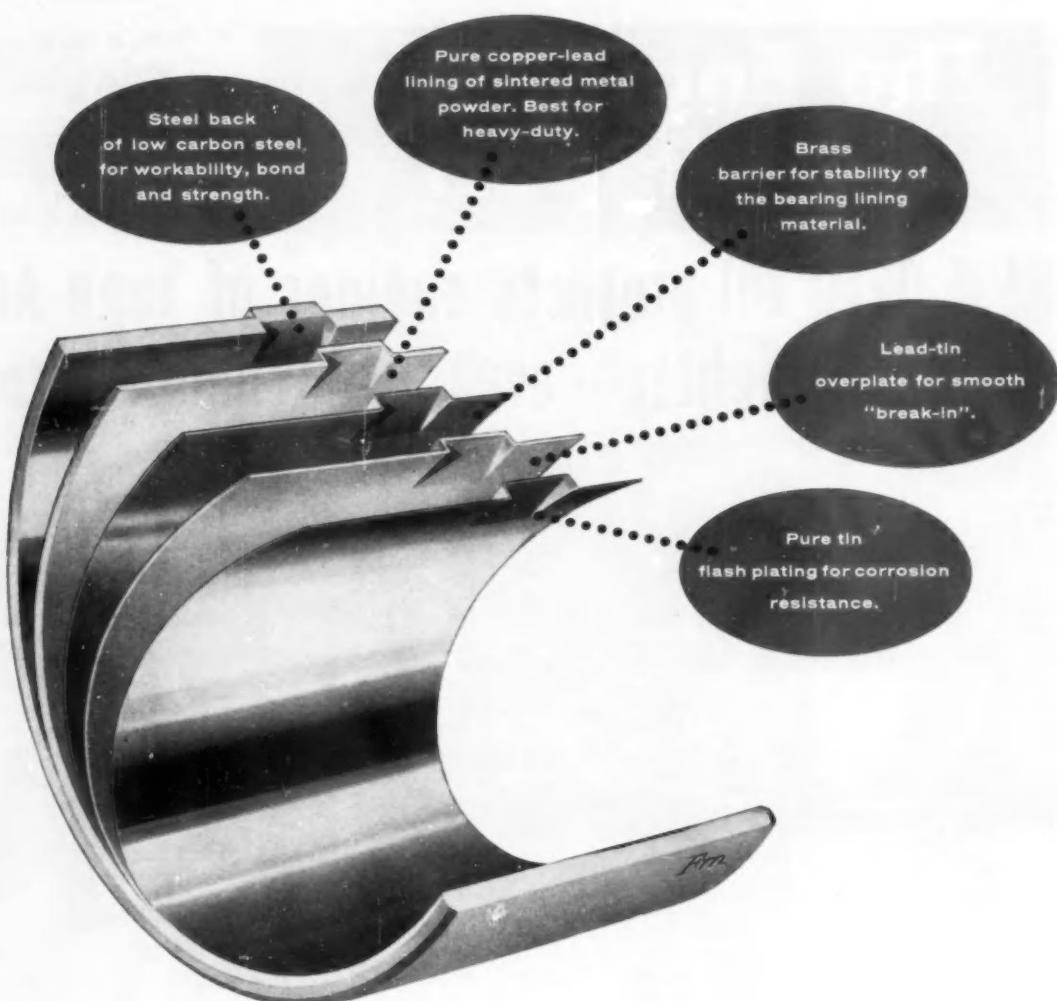
Metal-adhesion qualities keep oil on parts in running or idle engine—inhibitor resists foaming



TRADEMARK "RPM DELO" AND DESIGN
REG. U. S. PAT. OFF.

STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
THE CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey • THE CALIFORNIA COMPANY, Denver 1, Colorado





This is why the Fm Sintered

Copper-Lead Bearing is the Heavy-Duty Fleet Mileage Bearing

Your kind of bearing, Mr. Fleet Operator! Designed for you, all the way. Federal-Mogul's patented "mileage-builder"—pure sintered copper-lead powder—gives you a tough, durable bearing lining. In this lining, the copper (for strength) and the lead (for "softness") are evenly distributed and well-bonded.

The various overplates are carefully engineered

to meet known "inside-the-engine" conditions. Fm sintered copper-lead bearings give you the kind of engine performance you need for profitable fleet operation. They give you overhaul-to-overhaul bearing life...dependable and trouble-free! Ask your Federal-Mogul jobber. He has complete coverage, provides fast Federal-Mogul service on your heavy-duty engine bearing needs!

FEDERAL-MOGUL SERVICE

Division of Federal-Mogul-Bower Bearings, Inc.



B.F. Goodrich

AVL-2181-A

OPERATED BY ALLIED VAN LINES, INC.
7 BROWNSVILLE ROAD
PITTSBURGH, PENNA.
U.S.C. MO. NO. T-3348

KENTUCKY



Robert Watson checks air pressure of new Traction Express tire as Charles Sheely watches.

All-Nylon Traction Express tires give moving company 135,000 drive-wheel miles

"WE RECENTLY removed a set of all-nylon B. F. Goodrich Traction Express tires after 135,000 miles on drive-wheels," writes Charles I. Sheely, partner of Jimmy Wilson, Jr. Storage of Lancaster, Pa. "We plan to use these same tires as spares because, without recapping, they have more than enough tread to bring a van from the West Coast. When finally smooth, we will recap and expect another 25,000 to 50,000 miles."

This is a typical letter. Truck operators all over the country call the B. F. Goodrich Traction Express the "100,000-mile tire". The tread is up to 46% thicker than that of a regular tire. And the curved cleats grip the road for maximum traction.

Under the tread is the B. F. Goodrich all-nylon cord body. Nylon withstands double the impact of ordinary cord materials, resists heat blowouts and

flex breaks. That's why the Traction Express all-nylon cord body outwears even the extra-thick tread, can be recapped over and over!

See Traction Express tires at your B. F. Goodrich retailer's today (available in either nylon or rayon construction, both types with the money-saving B. F. Goodrich nylon shock shield). Or write *The B. F. Goodrich Company, Tire & Equipment Division, Akron 18, Ohio.*



CRAWFORD Manufacturing Co., Richmond, Va., makes textile products, gets 2 recaps from Traction Express tires on delivery trucks.

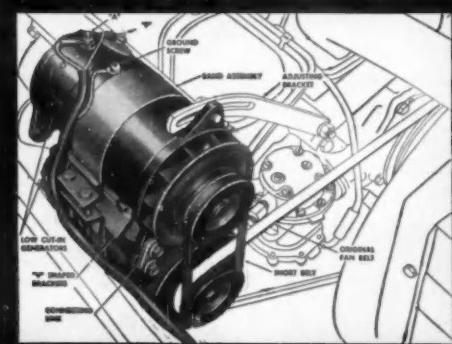
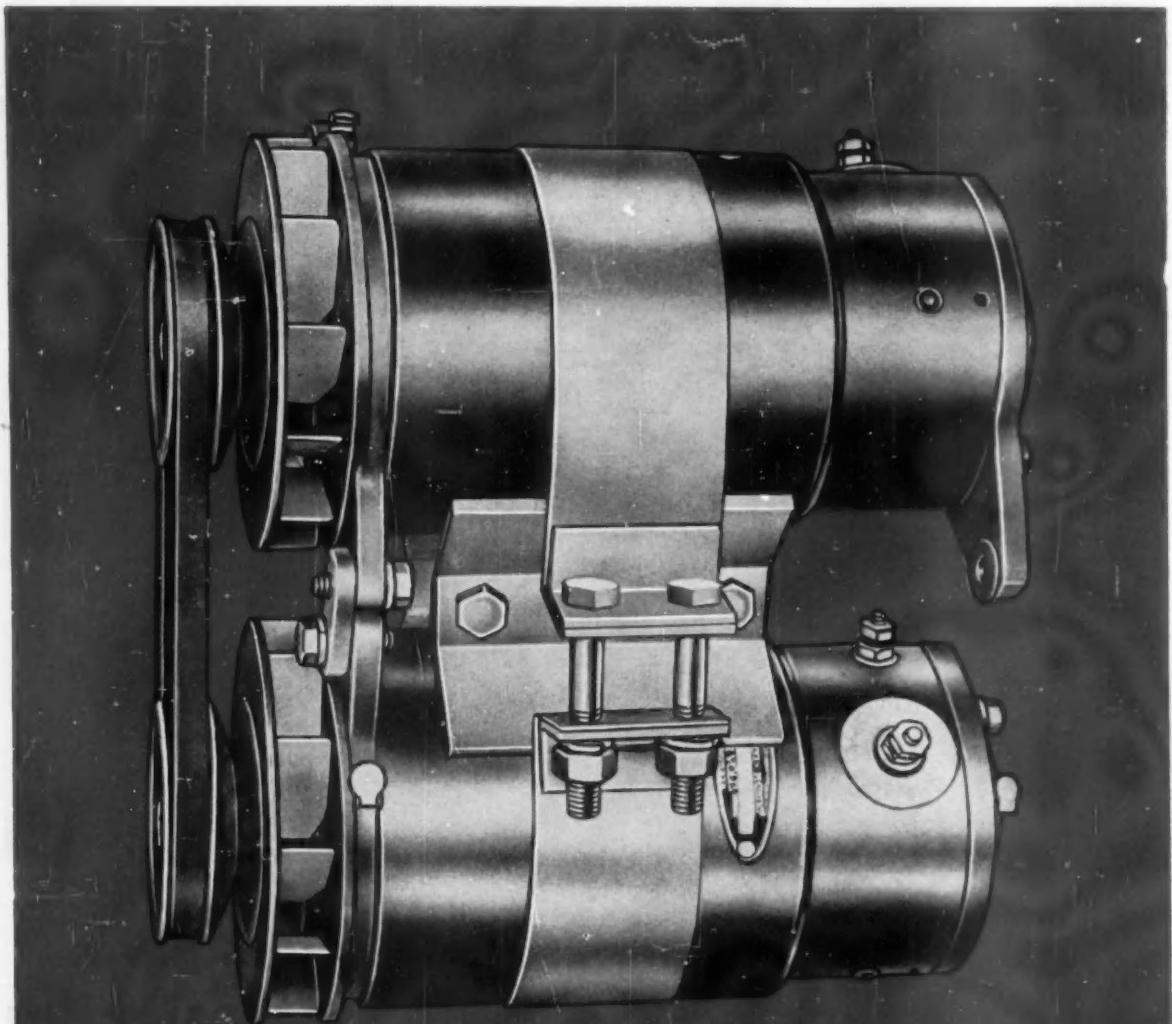


JACK MOORE and Son of Tamaroa, Illinois, reports these Traction Express tires have travelled 113,000 miles, will be recapped.

Specify B. F. Goodrich tires when ordering new trucks and trailers



Your B. F. Goodrich retailer is listed under Tires in the Yellow Pages of your phone book



Delco-Remy Piggy-Back Generator Application Kits are available for most popular makes of cars and light trucks

economical way to get extra electrical power

DELCO-REMY piggy back GENERATORS

Offer "tailored" extra output in single voltage systems . . .
permit use of 6- and 12-volt units on the same vehicle

If you operate taxis, police cars, light delivery trucks or other similar fleet vehicles needing extra or special electrical power . . . Delco-Remy piggy-back generators are your low-cost solution.

Put a 6-volt generator on top of a 12-volt original equipment generator and you can operate a separate 6-volt system for radios, sirens and other 6-volt electrical units on the same vehicle. If charge-at-idle, more low-speed output, or higher maximum output in a single voltage system is your need, you can "tailor" performance by teaming up two suitable generators from the wide selection available.

Packaged kits, complete with instructions to help you do the conversion job quickly and economically, are now available. See your General Motors car or truck dealer or your United Motors System dealer soon for complete information. Delco-Remy, Division of General Motors, Anderson, Indiana.



GENERAL MOTORS LEADS THE WAY—STARTING WITH

Delco-Remy

ELECTRICAL SYSTEMS



CHAMPS OF EVERY



NEW 1956 CHEVROLET

WEIGHT CLASS!

CHEVROLET

New Chevrolet trucks for '56 bring you new heavies, middleweights and lightweights in eight great new series—new power and performance to save more money on your hauling job!

New Heavyweights—New

Tandems! All-new heavyweights in 9 wheelbases, with maximum G.V.W. ratings up to a new high of 32,000 lbs.; G.C.W. up to 50,000 lbs.

Ultra-Modern Features!

Tubeless tires, standard; High-Level ventilation and panoramic visibility; plus Concealed Safety Steps on most models.

Wider Range of Drives!

There's an automatic drive in every series with new Powermatic for most middleweights and heavies; Hydramatic for light-duty models. Both extra-cost options. A new 5-speed transmission is standard in 9000 and 10000 series models; optional at extra cost in other heavies and most medium-duty models. New heavy-duty 5-speed is an extra-cost option in models with new Loadmaster V8.

A Modern V8 for Every

Model! And introducing the completely new 322-cu.-in. Loadmaster V8, standard in new 9000 and 10000 series heavyweight models.

See Your Chevrolet Dealer

and his new Task-Force line before you buy. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

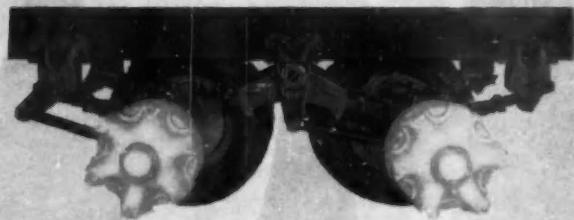


TASK·FORCE TRUCKS

Presenting the latest advancement in
Suspension Engineering and Design . . .

New "21" Challenger SERIES

REYCO® TANDEM S



- Completely engineered for work and continuous service.
- Lightweight but structurally stronger.
- Self-centering rubber bushings guard against metal-to-metal contact of mating parts.
- Completely non-lubricating REYCO-LASTIC bearings with Model 21218-3.
- Increased spring bearing area for softer ride.
- A complete new line of single axle and tandem suspensions for all over-the-highway operations.

For the facts, send for our Catalog T-255.

SALES & SERVICE NATIONWIDE!

COPYRIGHT 1956, REYNOLDS MANUFACTURING CO.



T-156

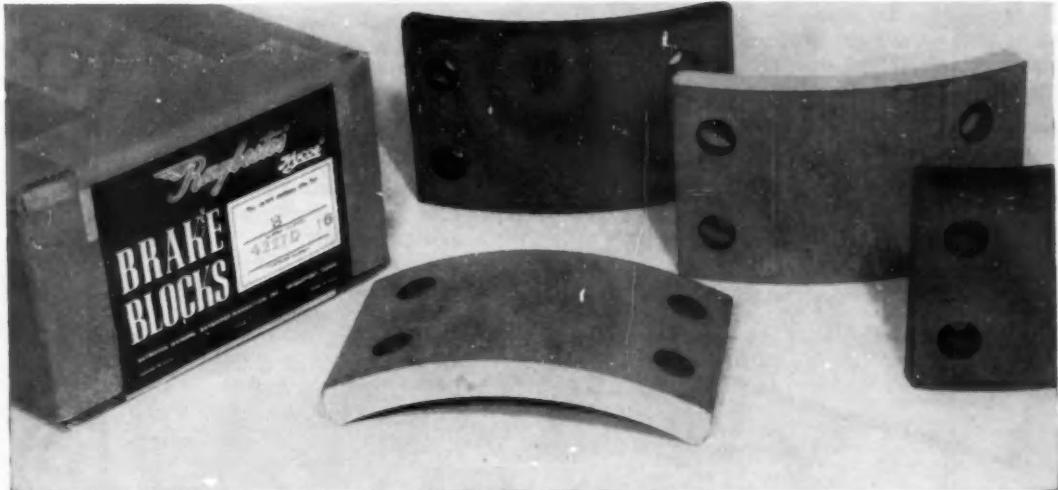
REYNOLDS MANUFACTURING CO.

SPRINGFIELD, MISSOURI

Raybestos®

UNIFORMITY

will give you lower cost-per-mile



Yes, you will have lower operating costs because of the quality, uniformity and performance of these famous Raybestos products • **Brake Blocks** • **PGT Sets** • **Clutch Facings** • **V Drive Plates** • **Fan Belts** • **Radiator Hose**. To learn more about the savings Raybestos can give you, ask your Jobber Salesman about the unique Raybestos Fleet Engineering Plan.

Raybestos®

AMERICA'S BIGGEST SELLING BRAKE LINING



RAYBESTOS DIVISION of Raybestos-Manhattan, Inc., BRIDGEPORT, CONN.
RAYBESTOS-MANHATTAN, INC., Brake Linings • Brake Blocks • Clutch Facings • Fan Belts • Radiator Hose • Industrial Rubber, Engineered Plastic, and Sintered Metal Products • Rubber Covered Equipment • Asbestos Textiles • Laundry Pads and Covers • Packings • Abrasive and Diamond Wheels • Bowling Balls

First complete tubeless new savings for

Truck, rim and tire industries adopt Goodyear's
"SMALLEST-TO-LARGEST" tubeless truck tire and rim development—
assuring simple, positive, airtight mounting!

A YEAR AGO, Goodyear announced the world's FIRST tubeless tires for trucks of *every* size.

In that short time, the transportation industries have adopted Goodyear's complete program. This "Smallest-to-Largest" program offers the right type mounting for smaller tires — the right type for larger — and *both* the simplest, most practical, most efficient of their types ever devised.

That's why you'll be seeing Goodyear tubeless tires on old and new vehicles of all sizes. Everything from huge highway haulers and giant earth-movers to small pickup and panel trucks can now have these Goodyear *tubeless* time- and money-saving advantages:

GREATER PAY LOAD—Lighter than regular tire, tube, flap and rim assemblies—you can take bigger *pay loads*!

COOLER RUNNING—Up to 25° cooler than conventional tires—means longer tire life on high-speed and heavy-duty service.

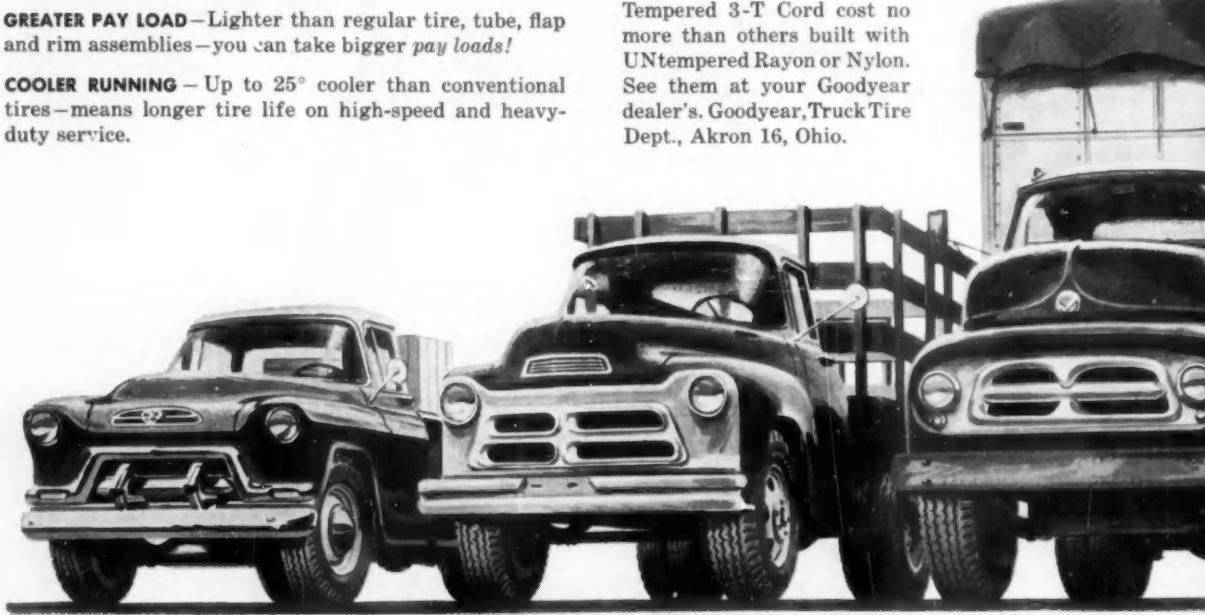
NO TUBES TO CHAFE—no flaps to cause trouble! This big cause of expensive down time now ended forever!

FEWER "QUICK FLATS" AND ROAD DELAYS—Puncturing objects are held without air loss up to thousands of miles! You can make repairs at end of run!

FASTER REPAIRS—You can often fix punctures without dismounting tires!

SLOW LEAKS INSTEAD OF BLOWOUTS—In Goodyear tubeless tires, small injuries can be quickly detected and repaired before costly damage.

THE PRICE IS RIGHT BOTH WAYS—Goodyear tubeless truck tires cost no more than conventional types with tubes—and tires built with Triple-Tempered 3-T Cord cost no more than others built with UNtempered Rayon or Nylon. See them at your Goodyear dealer's. Goodyear, Truck Tire Dept., Akron 16, Ohio.



Buy and Specify

GOOD 

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES

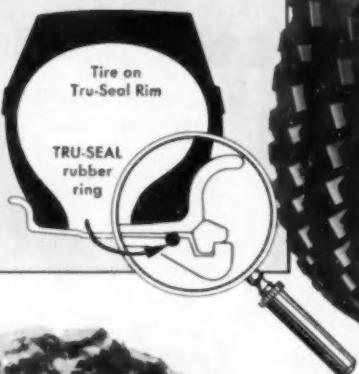
tire line brings trucks of all sizes!

NEW GOODYEAR RIMS PROVIDE SIMPLE, AIRTIGHT MOUNTING FOR ANY SIZE TUBELESS TRUCK OR EARTH-MOVER TIRES —



Tire on
Drop Center
Rim

New One-Piece Drop Center Rims — for sizes up through 11:00 conventional cross section.



Tire on
Tru-Seal Rim

TRU-SEAL
rubber
ring

New Tru-Seal Rims—for sizes 12:00 and up, including all earth-mover and grader sizes. This rim is similar to multiple-piece rims now in use—PLUS airtight Tru-Seal rubber rings which compress into locking grooves when tire is mounted.



AND the greatest
truck tire SAVER
in 21 years —
3-T CORD!

Goodyear's exclusive 3-T Triple-Tempering Process makes possible a safer, surer air chamber. And 3-T Cord also controls excess stretch, makes Goodyear tires so phenomenally durable that you get up to 30% longer tire life—even on longest, hottest runs!



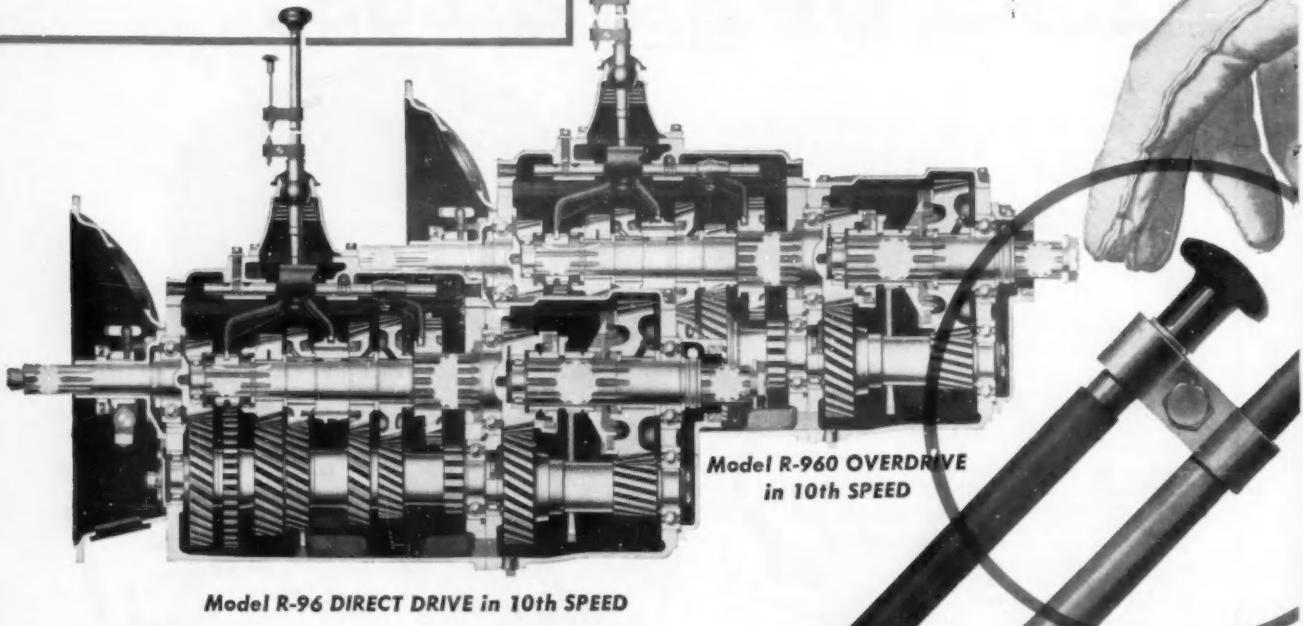
Tru-Seal - T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

YEAR
TIRES THAN ON ANY OTHER KIND



Look for this sign; there's a Goodyear dealer near you.

Announcing R-96 and R-960...



2

New, shorter, lighter . . .
Fuller semi-automatic

Fuller now offers for the first time . . . Models R-96 and R-960 Semi-Automatic ROADRANGER Transmissions with 10 forward and 2 reverse speeds.

With increased performance through exclusive operational features found in *no* other transmission . . . this new 96 series provides all the advantages of the 6 year old 95 series PLUS SHORTER LENGTH AND LIGHTER WEIGHT . . . the new models are 2½" shorter, and weight has been reduced 60 lbs.

No gear splitting . . . there are 10 selective ratios evenly and progressively spaced averaging short 28% steps. Higher road speeds are possible because the engine operates in peak

hp range . . . resulting in greater fuel economy.

There's less driver fatigue because there are 1/3 less shifts. Range shifts are pre-selected, automatic and synchronized. More cargo can be carried on the payload axles.

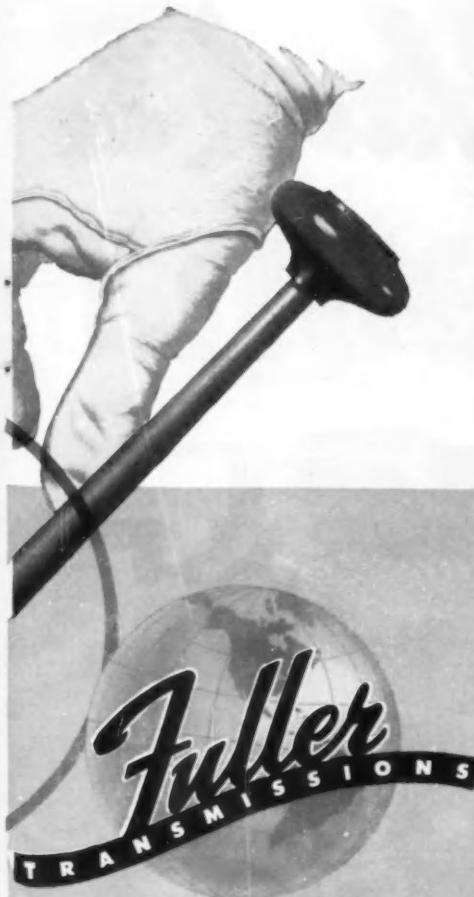
RoadRangers Give Complete Control

Truck drivers have the skill, ability, experience and fast coordination to anticipate ratio requirements from what they see on the road ahead. They can and will provide the right ratios in time, if given the equipment which will permit them to act within those few critical moments before engine rpm and torque drop. But, if they

have to wrestle it out with a two-stick main and auxiliary—or sit waiting for automatic actuation—they cannot be blamed for high ton-mile costs.

With the new Semi-Automatic ROADRANGER Transmissions, the driver has complete control of the situation. He can select ratios as required, exactly as his experience tells him is best.

Shifting up, or down, or skip-shifting in either direction, drivers find the new Fuller R-96 and R-960 All-Air Shift ROADRANGERS the most efficient transmissions available . . . the answer to the problem of the right-ratio-at-the-right-time—the answer to the flexibility of operation required



New Movie Available

A new 16 mm. sound and color film: "Semi-Automatic ROADRANGER Transmissions," just released by Fuller,

is a dramatic picture story showing actual operating scenes, and how to operate Semi-Automatic ROADRANGER Transmissions. It is being distributed free through truck dealers and distributors.



Instructions — Service

Fuller Manufacturing Company has prepared a 76-page Service Manual containing 232 illustrations

covering every detail of operation, lubrication, maintenance and repair of these models. Shifting instructions, condensed on illustrated tags for the R-96 and R-960 Models are supplied for attaching to the shift lever.

GEAR RATIOS

	R-96	% Step	R-960	% Step	
Tenth	1.00	27	.78	28	
Ninth	1.27	29	1.00	27	
Eighth	1.64	28	1.27	29	
Seventh	2.10	30	1.64	28	
Sixth	2.73		2.10		
RANGE SHIFT					
Fifth	3.54	27	2.76	28	
Fourth	4.48	29	3.54	27	
Third	5.80	28	4.48	29	
Second	7.43	30	5.80	28	
First	9.65		7.43		
Low Reverse	11.26		11.26		Lew Range
High Reverse	3.18		3.18		High Range
Weight					767 lbs.
Oil Capacity					33 pts.

10-speed ROADRANGERS®

to meet every varying condition of traffic, time and terrain.

Two New RoadRangers — Shorter length...weigh less

The 10 speeds are 2½" shorter in length than the older 95 series models, and weight reduction makes the new 96 series 60 pounds lighter. By replacing only 5 parts, the R-96 ROADRANGER can be converted to the overdrive model.

Both new models consist of two sections—a 5-speed transmission with closely spaced ratios, and a 2-speed auxiliary with wider spaced ratios. The combination provides ten forward speeds and two reverse speeds shifted by one lever. The ten forward

speeds are secured by using the ratios of the 5-speed section twice . . . the first time with the auxiliary section in low gear; the second time with it in high gear. The two reverse speeds are secured by using reverse in the 5-speed section through either high or low gear of the auxiliary section. The 10 selective ratios of the new ROADRANGERS are evenly and progressively spaced in short 28% steps. Range shifts are pre-selected, automatic and synchronized.

Automatic Air Shift

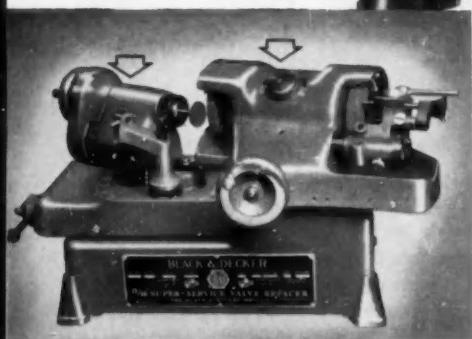
The auxiliary section is automatically shifted by air after pre-selection of the operating range required. The automatic shift in the auxiliary sec-

tion after pre-selection is always accompanied by a four-step shift in the 5-speed transmission, either up or down depending upon the direction of the shift in the auxiliary.

Specify the brand new R-96 and R-960 Fuller Semi-Automatic ROADRANGER Transmissions by name. Assure faster trip time, lower fuel consumption, longer engine life, less driver fatigue . . . greater profits. Check with your local truck dealer for the most efficient, easiest-shifting Fuller Transmission models to meet your specific trucking requirements.

Fuller Manufacturing Company
Transmission Division
KALAMAZOO, MICHIGAN

NEW, IMPROVED *Black &* is **POWER-BUILT**

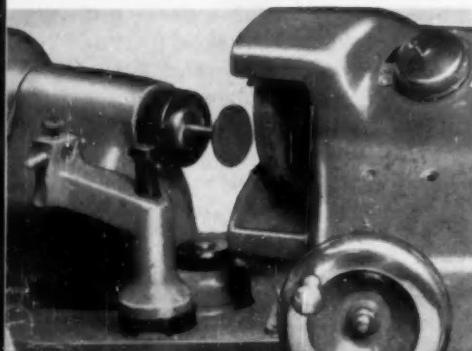
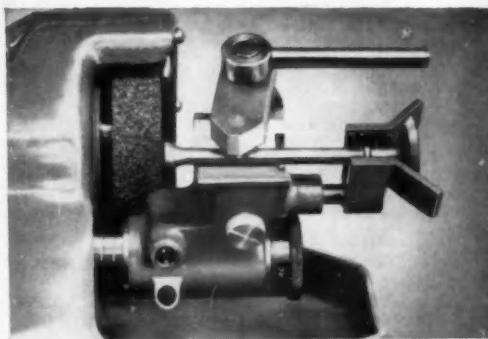


◀ **POWER-BUILT!** Two B&D-built universal motors drive collet and wheel spindles for abundant smooth power—Belt driven Work Head Spindle with reduction gearing at motor eliminates any chance of "chatter."

ONE COMPLETE UNIT! No "extras" to buy. Combined Micrometer Valve Stem and Rocker Arm Grinding Attachment with exclusive Quick-Clamp for fast locking of stems, tappets is standard equipment.

◀ **TRAVERSE GRIND** at any angle! 0° to 90° valve angle adjustment... capacity to handle up to 4" valve heads; $\frac{3}{16}$ " to $1\frac{1}{16}$ " valve stems . . . consistently good grinding performance!

NEW COOLANT SYSTEM! New coolant circulating method—all tubes and lines completely concealed! 1-gallon coolant reservoir with baffle plates. Single valve control wet grinding at both valve and attachment wheels.



Decker® VALVE REFACER

for faster valve job profits!

- ★ Loaded with time-saving, cost-cutting features!
- ★ No special skills needed to operate it!
- ★ Buy it for as little as \$13.79 per month!

This B&D Deluxe Super-Service Valve Refacer—redesigned with many *completely new* and exclusive features—will revolutionize your valve job business!

Yours will be the best equipped shop—turning out the best work—and you will pocket extra profits, *in less time*. You'll move valve jobs out faster and cut labor costs to the bone. You'll eliminate costly "come-backs" and give your customers much finer, more accurate workmanship ... and build your valve job profits through customer satisfaction and word-of-mouth boosting! Check these features against all others—then think of this: You get easy, long terms from your B&D distributor—No big initial investment needed! See him today, or write: THE BLACK & DECKER MFG. Co., Dept. 3903, Towson 4, Md.

PLUS Constant spindle speed; fast, efficient valve chucking including adjustable end stop; all bearings readily accessible for precision adjustments; *many other terrific features!*

Also Available . . .
Sensational new air chuck as optional equipment for super speed valve refacing by shops doing high production work.

Your distributor has special credit arrangements all ready for you—no red tape, no delay. This refacer can be yours for as little as

\$13⁷⁹
per month!

Your profits start at once! Make yours the best equipped shop in town, with the new, improved B&D Deluxe Super-Service VALVE REFACER. See your distributor for full details today!



LOOK IN THE YELLOW PAGES UNDER "TOOLS-ELECTRIC"

Black & Decker®
PORTABLE ELECTRIC TOOLS



NYLON CORD TRUCK TIRES SAVE YOU MONEY 5 WAYS

1. NYLON MEANS FEWER ROAD DELAYS. Nylon cord tires virtually eliminate cord failures from flexing, moisture, heat and impact. Nylon cords help you maintain strict schedules and on-time deliveries, save drivers' time and service costs.

2. NYLON MEANS MORE RETREADS. Because their casings are tougher, nylon cord tires can be retreaded again and again. And every retread stretches your tire dollars . . . brings down costs per mile.

3. NYLON MEANS MORE OVER-ALL MILEAGE. Tough nylon cords mean fewer tire failures . . . higher average tire mileage.

4. NYLON MEANS LESS TIRE INVENTORY. With nylon, you can reduce your tire reserve . . . free your capital for other business needs. Fewer failures and more mileage per tire mean you need fewer spares on

hand . . . fewer tires per year.

5. NYLON MEANS SAVING ON TIRE REPAIRS. By guarding against every major cause of tire failure, nylon cords save you service charges and tire repair costs.

NYLON CAN CUT YOUR YEARLY TIRE COSTS. You'll get more miles per dollar, more profit per load . . . when your trucks roll on nylon cord tires. Ask your dealer about nylon cord tires today. Du Pont makes the tough, long-lasting yarns that are used by rubber companies to make the tires that give extra protection against tire failure. Du Pont does not make tires.



BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY



NOW . . . IN PASSENGER-CAR TIRES, TOO . . . THE STRENGTH OF NYLON . . .
FOR UTMOST SAFETY . . . SUREST PROTECTION AGAINST TIRE TROUBLE

Phony Fables about Oil Seals



Fable No. 1

Always send out when you need new oil seals

OK, if you prefer. But it saves travel, and cuts down-time if you stock needed seals in your shop.

It's easy and inexpensive. Your parts supplier inventories your equipment, and suggests a stock custom tailored to your needs. He maintains it, revises it as you change units; no extra work for you. In addition, you enjoy price advantages as a stocking fleet shop.

Leading fleets agree with equipment manufacturers that it's the best practice on repairs as well as on Preventive Maintenance inspection to install new seals whenever old ones are removed. Make this easy for your shop; note it down now to "call parts house about National Oil Seal service stock."

You can be sure National Oil Seals are perfect replacement, since National makes original equipment seals for every make of truck and car, and most other vehicles.

Another Phony Fable: Any seal that fits is right!

Wrong! Thousands of dollars and months of engineering go into original equipment seals. NMB provides for trucks, buses and cars. Then vehicle manufacturers road test to be sure perfect sealing is achieved. A hundred seals may fit the bore. But only the right one—accurately engineered and quality made—will seal properly. Don't chance it—insist on perfect fit National Oil Seals.



**NATIONAL
OIL & GREASE
SEALS**

O-RINGS SHIMS

Approved original equipment for all cars, trucks,
buses and tractors.



Support this
industry-wide
program



NATIONAL MOTOR BEARING CO., INC.

GENERAL OFFICES: Redwood City, California
PLANTS: Redwood City, California and Van Wert, Ohio

Now, at your U. S. Royal Dealer's!

an entirely new
U.S. ROYAL with exclusive



Look — over 40,000 threads of fine, flexible steel are cushioned between the tread and multiple plies of Super Royalon Cord. They form a Safety Shield invulnerable to ruptures and cuts—not only for original tread life but for extra recap life as well!

kind of truck tire - SAFETY SHIELD*

invulnerable to ruptures and cuts in the vital tread area!

Now, for every trucker in America, a whole new concept of tire construction makes possible an entirely new kind of truck tire—the safest and toughest ever known!

This new concept, incorporating the exclusive Safety Steel Shield, brings you the strength of steel combined with full flexibility, light weight and soft ride—without increased inflation!

As a result, new U. S. Royal Truck Tires are invulnerable to highway hazards in the vital tread area. In millions of test miles, they had no ruptures, no blowouts, no groove cracks, no tread separation!

What does this mean in terms of trucking safety?

It means new safety for your valuable trucks—they ride secure from the dangers and mishaps caused by sudden tire failure from road hazards.

It means new safety for your drivers—they travel with new confidence, free from the apprehension that makes for driving fatigue.

It means new safety for your loads—they are protected from breakage due to accidents, from spoilage due to road delays.

What it means to trucking efficiency is just as important—fewer interrupted schedules, more on-time trips, greater service dependability that keeps present customers and makes new customers.

Right now, your U. S. Royal Dealer can show you the world's safest, toughest truck tires—the U. S. Royal Fleetway and U. S. Royal Super Fleetway with exclusive Safety Steel Shield. He can demonstrate all their benefits, point by point. Call him for the facts—right away!

*Patent Applied For



More and Better Recaps. Shielded by steel cords, carcass stays "like new" for extra recaps—without the necessity for section repairs.



Tread Cuts Stopped. Safety Steel Shield is a positive barrier against tread cuts penetrating and damaging the cord body.



34° Cooler Running. Under fast operating conditions, steel cords conduct heat away from "hot spots", preventing heat build-up in tread area.



Groove Cracking Prevented. The steel cords keep the tread from shifting and expanding under stress, prevent development of groove cracks.



United States Rubber

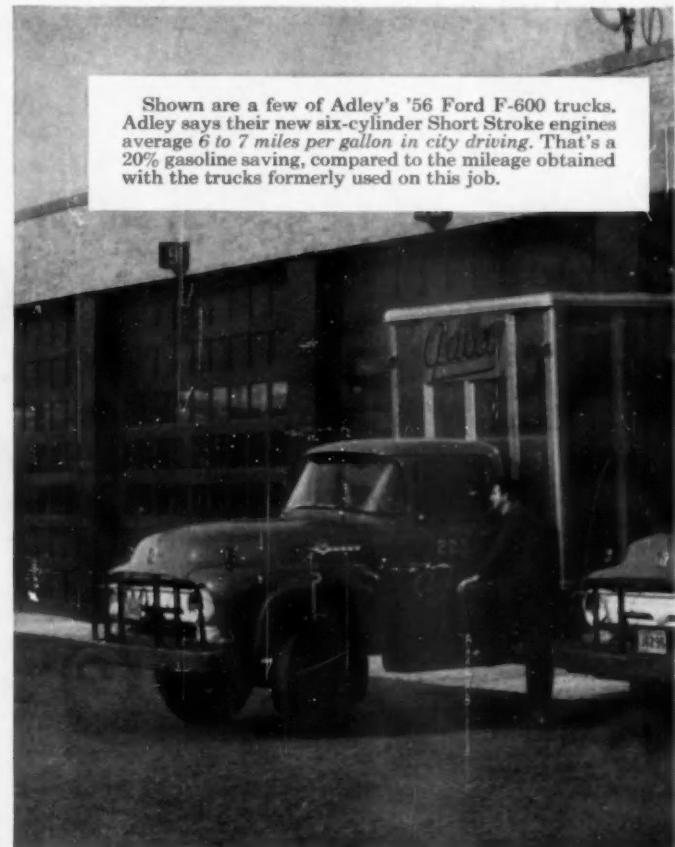
"Our Fords sure 'KO' upkeep costs . . .

If all my equipment
were as tough as
our 90 FORD F-600
trucks, I'd have no
maintenance problems,"
says Mickey Adley

"We depend on Ford for round-the-clock deliveries. We wouldn't have 'em if we weren't sure they were the best trucks for the job!"

Adley Express Company has nineteen ultra-modern terminals stretching from Norfolk, Virginia to Cambridge, Mass. They're one of the largest freight haulers in America. In 1955 their trucks delivered over a billion pounds of cargo along the eastern seaboard. The latest IBM office

Show are a few of Adley's '56 Ford F-600 trucks. Adley says their new six-cylinder Short Stroke engines average 6 to 7 miles per gallon in city driving. That's a 20% gasoline saving, compared to the mileage obtained with the trucks formerly used on this job.



The three Adley brothers—Dan, Mickey and Ralph

equipment clicks off monthly cost analyses on every unit in the Adley fleet. President Mickey Adley knows he can count heavily on Ford trucks to do the best cost-cutting job . . . for more miles per gallon . . . with less down time than ever.

These advantages—and more—can also be yours. Go Ford—like other big fleet operators. Your cost analyses will show (like Adley's) that *Fords get more work done at a lower operational cost.*

Before you buy your next truck see the FULL LINE at your Ford Dealer's. You'll find bigger payload capacities than ever—throughout the line.

FORD TRUCKS LAST LONGER . . .



Only Ford gives you all these "LONG LIFE" Heavy Duty engine features—First Time in 2-Ton Field!

1. Longer-lasting exhaust valves. Sodium-cooled; run up to 225 degrees cooler than solid-stem type.

2. Up to 50% longer valve life. Integral valve guides transfer heat to coolant faster than commonly used pressed-in guides.

3. High engine output. Maintained with solid tungsten-cobalt alloy exhaust valve seat inserts.

4. Tighter valve head fit. Dished-

type intake valves are self-sealing even under extreme heat conditions.

5. Prolonged cylinder head and gasket life. Stress-relieved cylinder heads expand evenly under extreme heat, permit better cooling.

6. Longer bearing life. Rigid, deep-skirt crankcase gives main bearings full 240° support, instead of the usual 180°.

7. Anti-fouling plugs. New 18-mm. spark plugs resist fouling up to 3

times longer than ordinary plugs. New long-life electrodes.

8. Faster starts. Better ignition, more positive spark action with Ford's new 12-volt electrical system.

9. Better piston performance. Aluminum alloy pistons with integral steel struts control expansion for precise fit.

10. Greater fuel savings. New carburetor metering system results in better fuel atomization and economy.

Certified by independent insurance actuaries for the ninth consecutive year! Studies of over 10,068,600 current license registrations show that Ford Trucks last up to 9.9% longer than any of the other 4 leading truck makes!

"I RIDE THE NEW BOSTROM TRUCK SEAT FOR Safety REASONS"

Floyd Pemberton, America's "Truck Driver Of The Year",
Reports On The "LEVEL RIDE 80" Truck Seat.

THE FLOYD PEMBERTON REPORT

"I first tested the new Bostrom "Level Ride 80" seat on a run from Detroit to St. Louis. This is a run I make frequently and I know every bump in the road. On this test I tried to hit *all* the bumps to see how the seat would perform. I wish to report that the Bostrom seat was terrific. Bumps, jars and jolts just couldn't reach me. From that test on I've ridden the Bostrom 80 for safety reasons. I know this seat helps me drive safely because I take far less vibration in it . . . and at the end of a day's run I feel less tired than I ever did in any other seat."



Floyd Pemberton of Detroit was chosen by ATA as the 1955 "Truck Driver Of The Year." The judges' decision was based on safety record, skill, length of service.



Electronic measurements prove the "Level Ride 80" transmits 80% less vibration to the driver than does any other conventional seat. This means more safety, lower operating costs for you . . . because fresh, rested drivers have fewer accidents.

[ACT NOW . . . Write to Bostrom
for free descriptive folder.]

BOSTROM

BOSTROM MFG. CO.

100 W. OREGON ST., MILWAUKEE 4, WISCONSIN

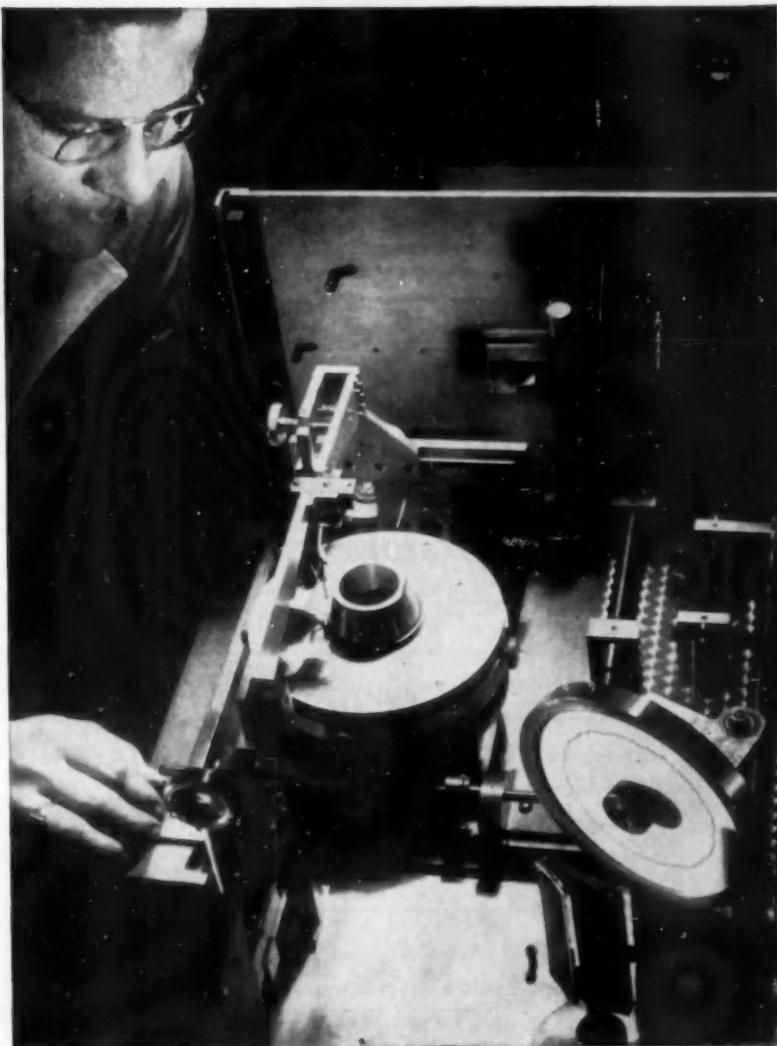


The Bostrom "Level Ride 80" is 50% safer than ordinary seats! The principle reason for this is the torsional spring type of suspension, a patented Bostrom exclusive. Bostrom's torsion springs can be adjusted for all driver weights. In addition, five other adjustments can be made to insure "sitting comfort" under all conditions.

© 1956

THE "LEVEL RIDE 80" IS AVAILABLE AS ORIGINAL EQUIPMENT OR REPLACEMENT—ORDER THROUGH YOUR TRUCK DEALER.

We measure curves to a millionth of an inch



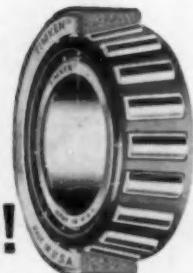
(Another reason why
TIMKEN® bearings are first choice
with truck manufacturers)

YOU'RE looking at a profilograph—a machine we helped develop that checks and records contours and smoothness of circular surfaces within a millionth of an inch. It helped us develop the grinding techniques and machines that give Timken® tapered roller bearings their truer, smoother microscopic surface finish. Result: Timken bearings give quieter, longer-wearing performance in your vehicles' moving parts—the vital zone.

Only Timken bearings give you all these advantages: 1) made of our own tough, fine alloy steel—we're America's only bearing manufacturer that makes its own steel; 2) advanced design, for true rolling motion; 3) rigidly controlled quality; 4) precision manufacture. That's why Timken bearings are first choice with men who know trucks best—truck manufacturers.

Take a good idea from them. When you buy replacement bearings, make sure they're stamped with the trade-mark "Timken". And for helpful service information, send for free booklet, "Timken Tapered Roller Bearings, Their Care and Maintenance". Write Dept. JCC-3, The Timken Roller Bearing Company, Canton 6, O. Canadian plant: St. Thomas, Ontario. Cable: "TIMROSCO".

SINCE THEY'RE BEST WHEN THE TRUCK IS NEW, THEY'RE BEST FOR REPLACEMENT, TOO!



TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS

NOT JUST A BALL ◻ NOT JUST A ROLLER ◻ THE TIMKEN TAPERED ROLLER ◻
BEARING TAKES RADIAL ◻ AND THRUST ◻ LOADS OR ANY COMBINATION ◻



THE EXCLUSIVE FEATURES OF HELP YOU CONTROL YOUR



AC EXCLUSIVE LONG-LENGTH
BUTTRESS-TOP INSULATOR
STOPS "FLASH-OVER"

AC EXCLUSIVE ELECTRODE-
TO-INSULATOR CONDUCTASEAL
PREVENTS "BLOW-BY"

AC EXCLUSIVE
DEEPLY RECESSED HOT TIP
PREVENTS FOULING



AC SPARK PLUG



THE ELECTRONICS DIVISION OF GENERAL MOTORS



AC COMMERCIAL SPARK PLUGS FLEET MAINTENANCE COSTS!

Length of AC's ribbed insulator from top to shell is greater than in other major brands regardless of number of ribs. This means maximum protection against power-robbing "flash-over." Such electrical leakage occurs most readily when insulators are allowed to accumulate dirt, or when there is excessive moisture present. So, keep your plugs clean. The AC long-path buttress-top insulator will do the rest.

When AC ignition engineers came up with the unique fused-metal-and-ceramic seal known as Conductaseal, they furnished truckers two important benefits. This seal is positive—it completely prevents compression leakage through the plug. Added to that, Conductaseal permits much better control of plug heat range—the factor that spells economy because it means most efficient full-power production from your engines.

AC has engineered its Commercial Spark Plugs to give full-power production and long life under every condition of commercial operation. The exclusive AC Hot Tip burns away combustion residues before they can deposit and foul the plug. Such fouling would cause misfiring—costly loss of power and fuel. AC Commercial Spark Plugs save you that—stay clean longer, boost power. That's why so many fleets standardize on these plugs for their maintenance.

Watch WIDE WIDE WORLD and BIG TOWN • NBC-TV



SERVICE-PROVED OVER MILLIONS OF MILES!

RUBBER AIR SPRINGS

**Engineered by GENERAL to float loads
over the roads easier... safer and**

COMPLETE SUSPENSIONS WITH
GENERAL AIR SPRINGS

IMMEDIATELY AVAILABLE FROM:

- Homan & Company, Incorporated
Cincinnati, Ohio
- Neway Company
Muskegon, Michigan
- Krause Corporation
Hutchinson, Kansas
- Spencer-Safford Loadcraft Inc.
Augusta, Kansas
- Trucktor Corporation
Mountainside, New Jersey

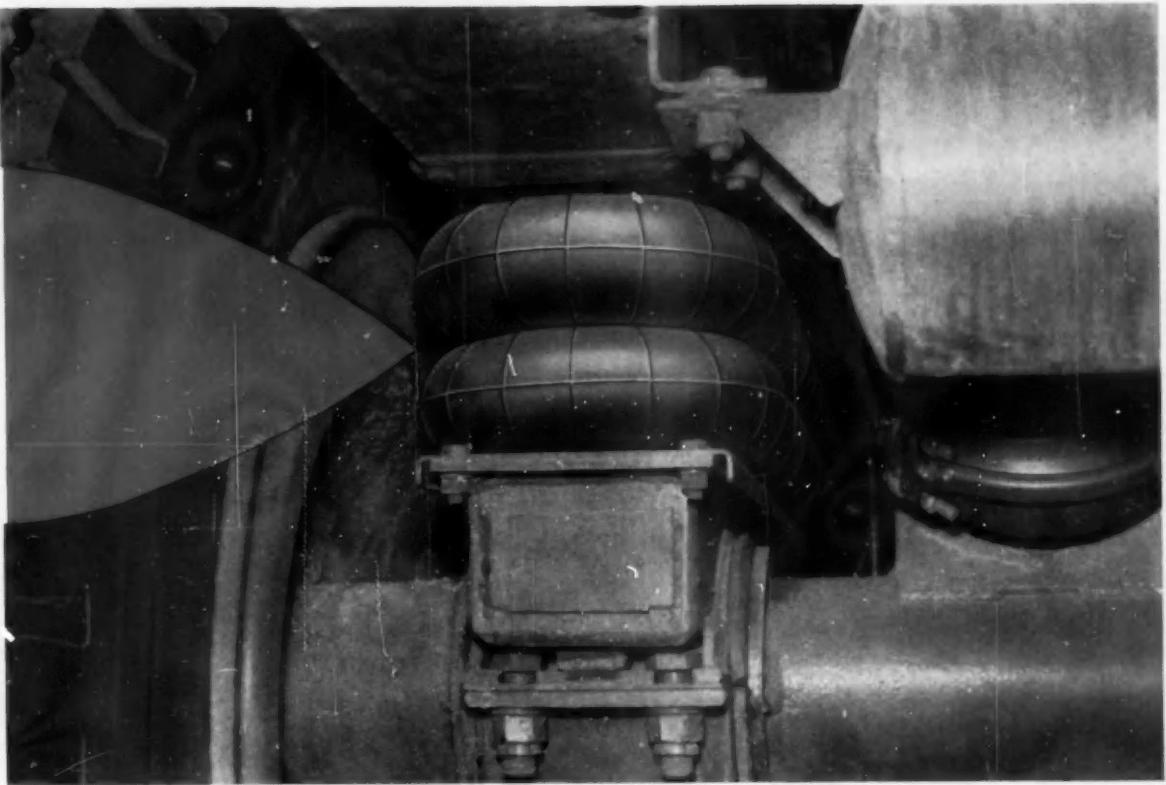
for lower cost!

You'll haul bigger payloads and roll up new records in overall operating efficiency when you equip your trailers or tankers with service-proved General Air Springs.

Designed to cushion your loads and equipment against costly road shocks and vibration, General Air Springs rate first call with progressive-minded fleet operators everywhere.

Take a look at the many advantages offered by this completely new and modern suspension system and then order General Air Springs today on your new equipment or for conversion of present units.

SPECIFY THE GENERAL AIR SPRING ON YOUR NEW EQUIPMENT



GENERAL AIR SPRINGS

- ★ Increase Payloads ★ Increase Safety!
- ★ Reduce Maintenance Costs!
- ★ Reduce Road Bounce & Vibration!
- ★ Lower Operating Costs ★ Increase Tire Life!
- ★ Reduce Load Shifting!
- ★ Assure Positive Braking Action!
- ★ End Spring Bottoming!
- ★ Cut Down on Cargo Damage!

THE GENERAL TIRE & RUBBER COMPANY

MEMBER OF T.T.M.A.

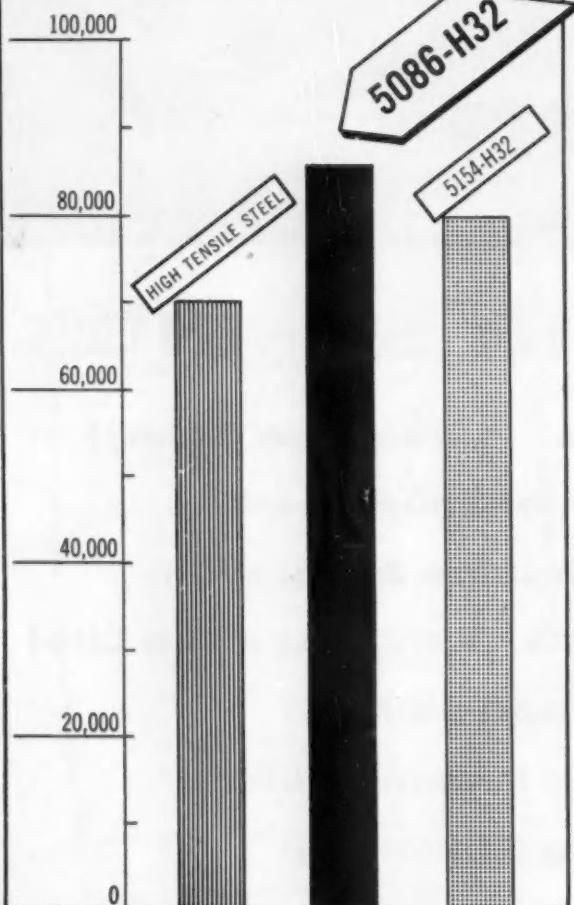
AIR SPRING DIVISION, AKRON, OHIO

NEW KAISER ADDS MORE PROFITS TO

COMPARATIVE BENDING STRENGTH

Equivalent stiffness

Aluminum 44% thicker than steel



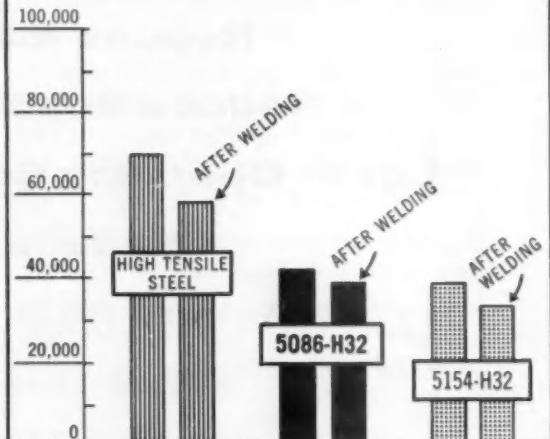
HIGHEST BENDING STRENGTH

This graph clearly illustrates the superior bending strength of new Kaiser Aluminum Alloy 5086-H32 as compared with high tensile steel and the other leading aluminum alloy in the field. Superior bending strength assures better puncture resistance, greater ability to absorb impact.



ULTIMATE TENSILE STRENGTH, PARENT METAL

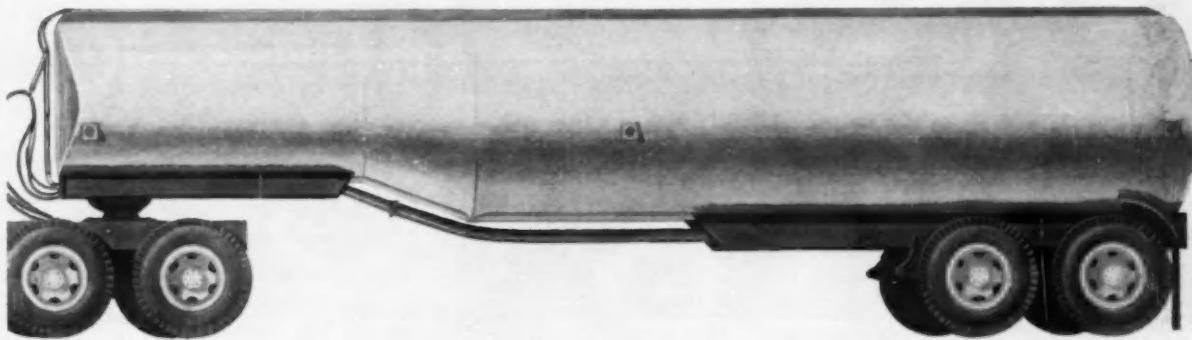
Aluminum and steel are same gauge



90% EFFICIENT AT THE WELD

New Kaiser Aluminum Alloy 5086-H32 welds as easily as mild steel—retains up to 90% of its original strength after welding. Compare this with the welding efficiencies of high tensile steel (approximately 83%) and the "next best" aluminum alloy (approximately 84%).

ALUMINUM ALLOY TANKER OPERATION!



KAISER ALUMINUM ALLOY 5086-H32 IS STRONGER THAN STEEL YET 50% LIGHTER IN WEIGHT!

HERE is an outstanding new alloy that can help you increase your payloads—and still stay well within legal strength and weight limits on tanker operations.

Kaiser Aluminum Alloy 5086-H32 has higher bending strength and higher welding efficiency than high tensile steel—yet it weighs only half as much as steel. Less weight means more payload—more profit for tanker operators.

This remarkable combination of highest strength, light weight, and corrosion resistance also permits basic savings in the operation of tank trailers *never before possible*.

The development of Kaiser Aluminum Alloy 5086-H32 for tank trailers is one more example proving

that the *versatility of aluminum plus design ingenuity* can solve almost any highway transportation problem!

We are eager to work as an "idea partner" with any manufacturer, large or small, who wants to take full advantage of the most versatile of all metals.

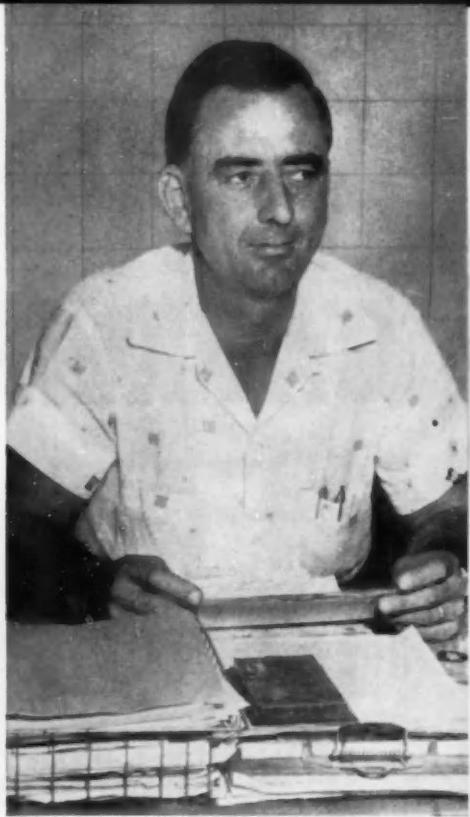
No matter what your trucking problem may be, our engineers will gladly work with you to develop a design which will help lower your costs... increase your profits! *For immediate service*, call the Kaiser Aluminum sales office listed in your telephone directory. Kaiser Aluminum & Chemical Sales, Inc., General Sales Office, Palmolive Building, Chicago 11, Illinois; Executive Office, Kaiser Building, Oakland 12, California.

Kaiser Aluminum

setting the pace—in growth, quality and service



Mr. Henry E. English, Chairman of the Board



Mr. Harold Odom, Supt. of Maintenance

WHETHER YOU OWN TRUCKS... SERVICE THEM... OR DRIVE THEM

Bendix-Westinghouse Air Brakes

performance they give RED

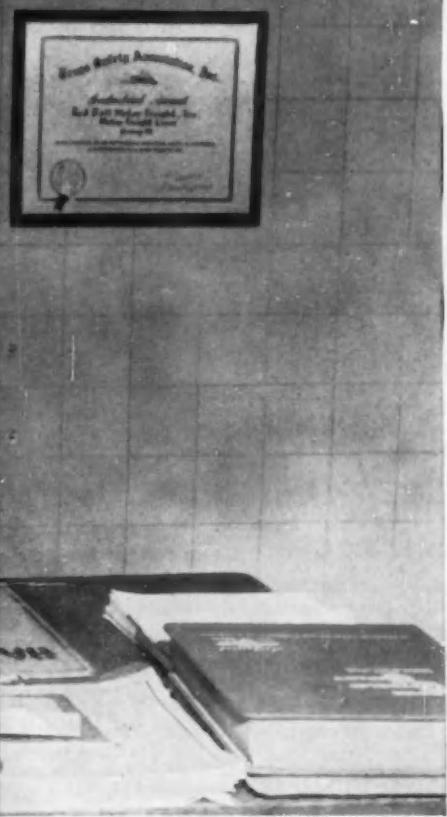


Bendix-Westinghouse has produced over 1,500,000 compressors during the past 25 years—far more than any other manufacturer. This experience is your assurance of excellence. TU-FLO 400 model above is designed for the medium and heavyweight classes. Other Bendix-Westinghouse compressors are for the light and extra-heavy-duty classes.

From general headquarters in Dallas, Texas, Red Ball Motor Freight rigs, numbering nearly 900 trucks, tractors and semi-trailers, travel some 4,180 miles of certificated routes throughout Texas, Oklahoma and Arkansas. Mr. Henry E. English, the fleet's Board Chairman and a past president of the A.T.A. says, "Good equipment well maintained is essential to us here at Red Ball in carrying out our policy of real personal service. Since our customers depend on us we must be able to depend on our equipment. That's why when it comes to air brakes we specify the best—Bendix-Westinghouse!"

To see why Red Ball Motor Freight is sold on Bendix-

More trucks travel more miles with



Mr. H. L. Hankins, Driver

can give you the same dependable **BALL MOTOR FREIGHT, INC.!**

Westinghouse Air Brakes check these facts taken from the company records:

Red Ball's Bendix-Westinghouse Air Brake equipped rigs roll up an annual total of over 11,000,000 miles at an actual compressor operating cost of only \$.00025 per mile . . . they maintain an average brake lining life of over 150,000 miles, while stopping loads which average 48,200 pounds per unit . . . they travel an average of 200,000 miles between compressor overhauls . . . and they increase driver confidence and efficiency resulting in better trip speeds with greater safety. In addition, Mr. Harold Odom, Red Ball's Superintendent of Maintenance, says, "Service is excellent on

our Bendix-Westinghouse equipment and we have never lost any road time due to a lack of service parts."

While such a record is outstanding, it is only one of many. Literally thousands of the nation's truck operators have experienced similarly profitable and dependable results with Bendix-Westinghouse Air Brakes. Why not follow their lead—specify Bendix-Westinghouse on your next new truck order . . . or consult your local Bendix-Westinghouse Distributor about converting your present vehicles to air with field installation kits. Either way, you'll join Red Ball Motor Freight, Inc., in agreeing that Bendix-Westinghouse Air Brakes are truly tops in stops!

Bendix-Westinghouse than with all other air brakes combined!

Bendix-Westinghouse **AIR BRAKES**

Fleet Owners' Choice —

FIRST

**FOR ENGINE PERFORMANCE
AND LOW COST MAINTENANCE**

Experience proves dependability — and the experience records of fleet owners, everywhere, are the basis of Zollner Piston popularity. Today, as for many years, Zollner Pistons are the dominant choice of most engine builders and most fleet operators. For replacement as well as original equipment, Zollner Pistons are specifically tailored to individual engine requirements. You can always be sure of highest engine performance and lowest maintenance cost when you specify Zollner for every piston job.

Over 70% of all Truck and Bus Manufacturers use and recommend
ZOLLNER PISTONS

ZOLLNER
PISTONS

HEAVY DUTY PISTONS by
ZOLLNER

FOR RECONDITIONING ALWAYS SPECIFY THE "ENGINEER APPROVED" PISTON

ZOLLNER • FORT WAYNE, INDIANA

COMMERCIAL CAR JOURNAL, March, 1956

NEWAY

Trailer tandem SUSPENSION



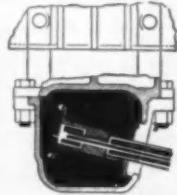
no LUBRICATION At any time.

ALL RUBBER MOUNTED wearing points mounted in rubber for thousands of miles of trouble free operation.



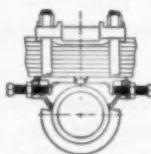
- THE LIGHTEST WEIGHT Tandem Suspension to be nationally marketed.
- CONTROLLED SPRING DEFLECTION only 1-5/8" from light to loaded designed with the High Cube Trailer in mind.

Rubber Mounted Spring End



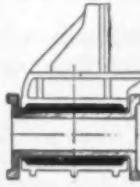
Spring ends sealed in rubber under compression allowing controlled movement for riding ease.

Positive Axle Alignment



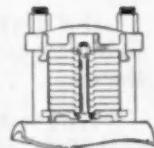
Simplified alignment procedure allows 1½" of adjustment for each axle.

Rubber Bushed Trunnion



Neway's proven, patented rubber bushing restricts flip-flop under an empty trailer and allows controlled movement under load.

Interlocked Spring Leaves



4" wide $\frac{3}{8}$ " thick wide springs provide improved lateral stability and reduce unnecessary weight in spring stack.

Write for bulletin No. T-600, and the name of your nearest distributor.

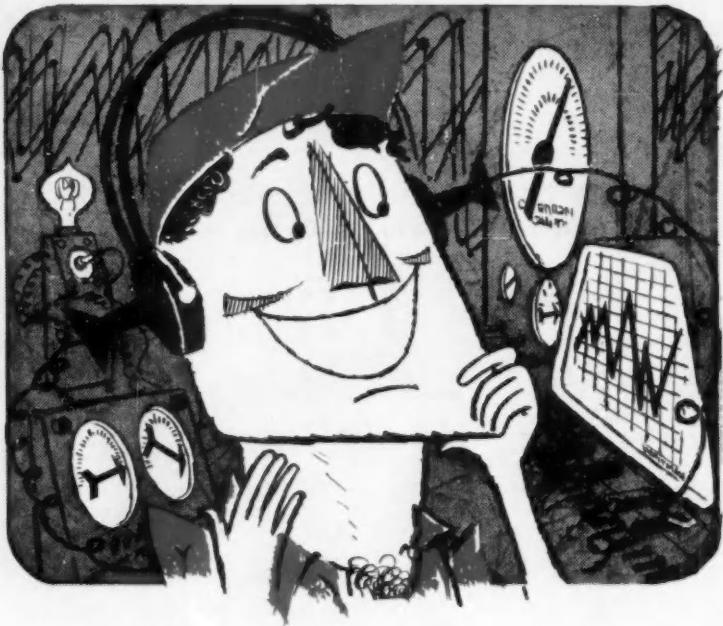
NEWAY Equipment Company

MUSKEGON, MICHIGAN, U. S. A.

DESIGNERS • ENGINEERS • MANUFACTURERS OF SUSPENSIONS FOR TRAILERS • TRUCKS • SPECIALIZED EQUIPMENT

CLIP AND POST ON YOUR OWN BULLETIN BOARD — REPRINTS AVAILABLE AT NOMINAL COST

CCJ BULLETIN BOARD



TINKERS B'WARE

The days of tinkering are over in a fleet shop. The old fashioned tinkerer wasted too much time, cost too many components and got in the way . . .

Why today a good mechanic wouldn't recognize a piece of bailing wire if he saw it. Just mention monkey wrench to him and you're in trouble. A good mechanic is the first to damn a tinkerer. But oddly enough, there are still some of these guys hanging around with their snow-gages and their wishmeters. These too shall pass . . .

Today's expert uses his head—in checking his vehicle—first. Many times it saves using a wrench. He checks—rather than examines. He determines wear and maladjustment with instruments instead of feeling for it by taking the damned thing apart. Sure he looks, but he uses instruments for eyes. That way he ain't prejudiced . . .

The best mechanic today carries instruments and tools for one thing—to keep out of trouble. And you won't find him tinkering with the carburetor or the spark just to see why it's working.

So take a tip from the guys who know their business. Keep your hands off—unless you find that your tender touch is needed. Don't be a tinker's damn . . .

Extra-heavy haulers:

Give your TRUCKS this 9-way test . . .

IT'S COSTING YOU MONEY to NOT have these Autocar extras that mean so much on tough truck operations. Why not investigate AUTOCAR now. It's today's greatest truck quality . . . your best truck value!

send for FACTS ABOUT AUTOCAR...NOW!

AUTOCAR DIVISION, Exton, Pa.
Division of The White Motor Company

Send me facts about the new Autocar All-American Line.

Name _____

Firm _____

Address _____

City _____ Zone _____ State _____

	YES	NO
Custom building — balanced construction		<input type="checkbox"/>
All-bolted construction		<input type="checkbox"/>
Dynamically balanced front wheel, tire and rim assemblies		<input type="checkbox"/>
Easy, positive vibration-free steering		<input type="checkbox"/>
Duridized sheet metal for long life		<input type="checkbox"/>
Renewable bushings protect critical wear points		<input type="checkbox"/>
Heavy-duty double-reduction rear for strength and power		<input type="checkbox"/>
Driver Cab engineered for safety, comfort and long life		<input type="checkbox"/>
Full-adjust contour driver seat		<input type="checkbox"/>

only Autocar owners
can answer YES all
NINE TIMES . . .

that means lower maintenance cost,
longer truck life—no matter how tough
the going, how big the payloads.



AUTOCAR TRUCKS
Division of The White Motor Company
EXTON, PA.
EXPORT DIVISION: CLEVELAND 1, OHIO, U.S.A.



Laugh it off!

ELMER WRENCHMAN, OUR MAINTENANCE SPECIALIST, SAYS: "A GIRL DOESN'T MIND A MAN WHO OFFERS HER GINGER-ALE, AS LONG AS HE DOES IT WITH PROPER SPIRIT."

ccj

Steno May: "How is your physical condition?"

Steno Fay: Fine. I've only been in a hospital once, and that was on account of my mother."

Steno May: "What did she have?"

Steno Fay: "Me!"

ccj

Truck Dispatcher: "Just as my girl and I were pleasantly making heavy love, her father rushed in with a shotgun."

Road Driver: "Didn't that make your flesh creep?"

Truck Dispatcher: "I'll say it did. Right under the davenport."

ccj

Fleet Operator: "In that letter I dictated to you, what kind of a way is that to spell 'pants'?"

Cute Secretary: "Sir, don't you remember? That was where you tickled me."

ccj

Maintenance Superintendent: "And you felt something wrong the minute you went into your house?"

Shop Foreman: "Yes, there was something electric in the air."

Maintenance Supt.: "What do you mean?"

Shop Foreman: "My wife threw the television set at me."

President of Fleety-Fleet: "My son was home from college over the week end and caught me kissing our pretty French maid."

Superintendent of Terminals: "I'll bet he took some dough away from you for that."

President of Fleety-Fleet: "No. He took the maid away."

ccj

Freight Claim Steno: "That new OSS&D clerk kissed me just like this, last night."

Trace Clerk: "Why, he should have known better!"

Freight Claim Steno: "Yes. He tried those ways later."

ccj

FATTY FLOORBOARDER, OUR JOVIAL GIFT TO THE WOMEN, SAYS: "WHEN A GIRL HAS HIDDEN VIRTUES, SHE OUGHT TO CHANGE DRESSMAKERS AND BRING THEM OUT INTO THE OPEN."

Cici Jay



"One day last week I made the mistake of standing next to him!"

SLIM 'N GREASY, OUR SHOP ROUSTABOUT, SAYS: "LOOKIN' FOR A NEEDLE IN A HAYSTACK AIN'T SUCH A BAD JOB IF YOU HAVE SUITABLE HELP."

ccj

Diner Waitress: "You say they arrested your mother-in-law for indecent exposure? Why did they do that?"

Truck Driver: "Her face was showing."

ccj

Freight Loader: "I've got a wonderful girl, but I haven't got the courage to tell her how much I love her."

Manifest Clerk: "What's the matter? She doesn't look dangerous."

Freight Loader: "I know, but have you ever seen my wife?"

ccj

Maid: "There were two men standing outside the window while you dressed, Madame."

Fleet Operator's Wife: "That is nothing, Celeste, you should have seen the crowd when I was younger."

ccj

The Traveling Freight Auditor went to the bookstore and asked for the book, "Fun In Bed" by Adamson. The clerk looked for it and couldn't find it. Finally she shouted to the manager in the next room: "Oh, Mr. Jones, we haven't had any 'Fun In Bed' for a long time, have we?"

Resume Work

Over the road-Over the years



All-Truck Built to save you the BIG money

You get a truck that's *all* truck, when you choose INTERNATIONAL. No passenger car engines or components are asked to do a truck job. Every INTERNATIONAL is designed as a truck, from the drawing board out.

The result? Fewer and less costly repairs. More time between overhauls. And on over-the-road hauling, that saves you the BIG money—the over-the-years operating and maintenance money.

INTERNATIONAL Cab-Over-Engine Trucks are specifically designed to combine maximum loadspace with

minimum wheelbase—plus the time-saving of greater maneuverability, and the safety of maximum visibility.

You get all these features to cut hauling costs down. And you get a truck that stays on the job dependably, longer, to cut costs still more.

There is an INTERNATIONAL COE Truck to fit your needs *exactly*, from a wide choice of 4- and 6-wheel models from 17,000 to 41,000 lbs. GVW, up to 65,000 lbs. GCW. Diesel power available, 27,000 lbs. GVW and up. Let your INTERNATIONAL Dealer or Branch show you, soon.

INTERNATIONAL HARVESTER COMPANY

• CHICAGO



Easy service accessibility cuts downtime and service costs. One man can swing the cab forward easily for complete access to engine, transmission, clutch and accessories. Takes only a few seconds.

INTERNATIONAL® TRUCKS



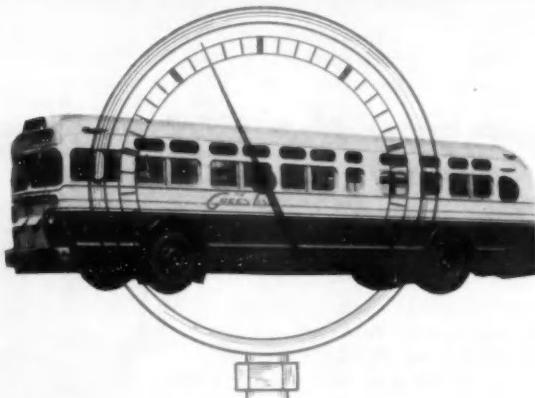
**All-Truck Built to
save you the BIG money!**

Motor Trucks • Crawler Tractors • Industrial Power
McCormick® Farm Equipment and Farmall® Tractors

Twenty minute inspection procedure takes seven pressure and three vacuum readings, provides a positive analysis of engine operating condition

By Harold A. Grenert, Superintendent of Equipment
Cincinnati, Newport & Covington Transportation Co.

Gaging the GM Diesel



LIKE MOST truck and bus operators, we have completely eliminated fixed mileage replacements of all major components. Like many, we base all adjustments and replacements on inspection results. But unlike most, we rely almost entirely on gages when it comes to checking our General Motors diesel engines, including the cooling system and torque converter drives.

This gage procedure is used at the 6000 mile inspection. Up to

that point, we have had only the usual daily checks and a 3000 mile pit stop for lubrication, brake adjustment and a quick visual inspection for oil leaks, transmission filters, etc.

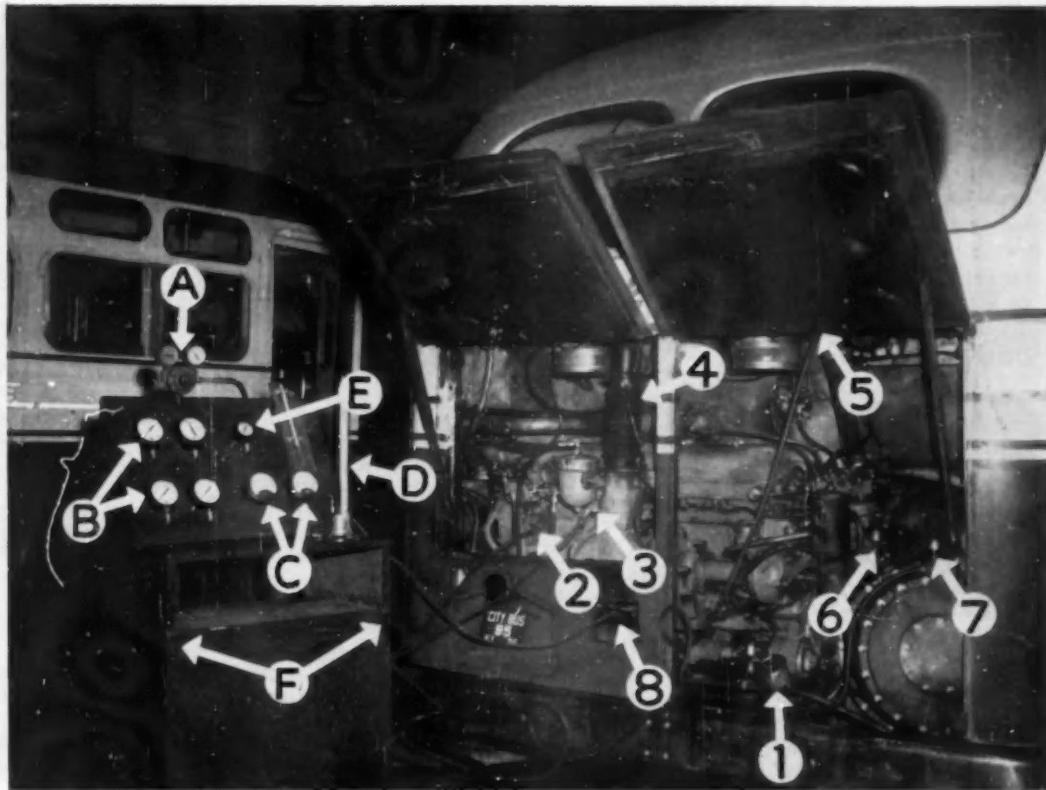
Heart of our gage system is the test bench shown in the accompanying photograph. This consists of a set of four pressure gages (some used more than once) reading from 0 to 100 psi, two magnahelic gages with scales reading from 0 to 35 in. of water and 0 to

2½ in. of mercury, a simple vacuum gage, a water manometer and an air pressure regulator fitted with air pressure gages on both sides. With these instruments, plus a standard pyrometer, we can tell an amazing number of things about engine performance and behavior.

Quick-Connect for Test

All of the gages are connected with flexible hose to a series of fittings which we have installed in the rear compartment of our coaches using quick detachable connections. These fittings, incidentally, consist of ordinary tire valve stems salvaged from discarded inner tubes. We insist, however, that the stems be equipped with Neoprene valve cores and the caps with lead seals. The snap-on quick detachable hose connections are available as a standard Schrader item.

It takes only 5 min. to hook up the gages, 10 min. to make the



Test stand incorporates air pressure gages and regulator (A), pressure gages (B), magnahelic gages (C), water manometer (D), regular vacuum gage (E) and, for easy rolling on rear castors, "pull out" handles (F). Portable tachometer (1) is also used. Gages are plugged in at wind box (2), blower (3), upper water inlet (4—behind bellows), air intake duct (5), fuel line (6), torque converter (7) and the dip stick tube (8)

readings and another 5 min. to disconnect. Thus in 20 minutes, the bus is normally ready for the remainder of its chassis inspection.

Beyond a substantial saving on inspection time, our gage procedure provides a permanent record of measurable conditions as opposed to "mechanics' opinions." In addition and more important, the system saves a tremendous amount of what I like to call "tinker time" for our gage procedure not only spots impending trouble but specifies the specific complaint, or failing that, spots the area of difficulty.

Saves Parts and Time

For instance the simple pyrometer used on both sides of the thermostat tells us instantly whether the thermostat is working or not as opposed to more than 45 min. required to pull the thermostat.

In addition, when a thermostat is pulled, it is usually replaced

with a new one whether needed or not. So we save considerably on parts as well.

As another example, we measure vacuum pressure on both sides of the air filter and can tell instantly whether restrictions in the air filters are within minimum standards. Our filters have frequently run as much as 40,000 miles without even being pulled.

So much for the general idea. Now let's see how the system works in detail.

Gaging Air Filters

A fitting for one of the two magnahelic vacuum gages is installed in the air-intake duct at the top of the engine compartment; the other immediately above the blower and between it and the air filters. For the air intake duct we allow a maximum of $1\frac{1}{2}$ in. of vacuum. If it is more than that we

know that our air intake screens are unduly clogged. For the fitting at the blower we allow 20 in. maximum. If it is more than that we know that our air filters are restricted. If it is less than that we know that they are OK for additional service.

Gaging Blower

Our first pressure gage fitting is mounted in the "wind box" just below and to the left of the blower unit. At 2000 rpm we specify 4 psi minimum pressure for the 4-cyl engine and 5 psi minimum for the 6-cyl engine. If the pressure reads higher than standard, we know that there is internal back pressure. If it reads lower than standard, we know that our blower

(TURN TO NEXT PAGE, PLEASE)

Gaging . . .

Continued from Page 67

output is not up to par. This could be due to a leak in the hand hole plates or to a restriction in the air intake system as noted above. The correct reading here is extremely important since it can affect readings of all other gages in the hook-up.

Gaging Cooling System

To check the cooling system for leaks, and particularly to check operation of the pressure relief valve in the surge tank, we use our special air line hook-up. One of the valve stem fittings is installed in the upper water line near the thermostat. This is connected by a short length of air hose to the gage on the outlet set of the air regulator mounted on the test stand.

Through this hose, we feed exactly 10 lb of carefully regulated air. Then with the air cut off, it should drop to 4 lb and hold for at least one minute. If pressure falls below 4 lb in one minute, it may be due to a leak in the cooling system or a leak through the pressure relief valve seat. If it drops under 4 psi in one minute, we charge system to 10 psi the second time and plug off line from pressure relief valve to atmosphere. If pressure then drops to 4 psi and holds, we know the relief valve is leaking. If it still drops, the leak is in the cooling system.

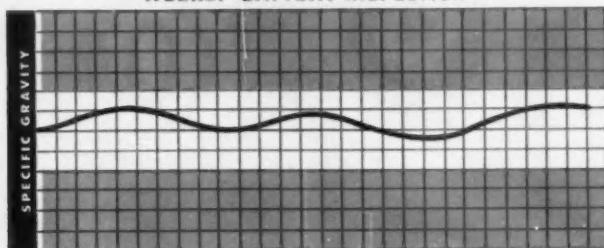
Gaging Fuel Pump and Filters

Another pressure gage attachment is fitted into the fuel line on the outlet side of the secondary fuel filter. Our standard is 25 psi minimum at 1500 rpm. Anything below that tells us that we have trouble either in the fuel pump or in the filter which may be restricted. In this case the filter is the more probable offender and is always checked first. We can also hook up the same gage on the inlet side if necessary.

Gaging Torque Converter

The next pressure gage is fitted

WEEKLY BATTERY INSPECTION



BATTERY MAINTENANCE is another of our pet subjects at Cincinnati. Some buses run high mileage, others low mileage; some have long night runs, others none at all. So instead of using fixed settings on the regulator we let each battery tell us what it needs.

Every week we take a hydrometer reading of the cell nearest the positive post, correct it to 80 deg F and plot it on a battery card. The card has a special green area between 1.245 and 1.255 specific gravity. If the plot stays within these limits everything is okay. If it goes high, we reduce generator output by .2 volts; if it goes low, we raise output .2 volts.

If the specific gravity does not raise after voltage is increased, the open circuit voltage of each cell is taken and recorded on another portion of the card. For each increase of 10 points of specific gravity we should have an increase of .01 volts. If not, the battery may be defective.

Any cell that remains 10 deg cooler than adjacent cell is defective, and when the open circuit voltage between cells varies more than .05 volts, battery is defective.

Using this system we have remarkably good battery life (up to five years), very good bulb "mileage," virtually no road failures due to battery failure and relatively little "tinker time" on the regulator. This has saved us 40 per cent in electrical parts replacement cost.

to the high pressure side of the torque converter. Here our standard is 25 psi at idle for 4-cyl models, 20 psi for 6-cyl, and 35 to 45 psi at stall. This check can tell us three things about the torque converter: (1) Condition of rings in the V-drive, (2) conditions of the turbine pump, and (3) condition of the over-running clutch.

For checking over-running clutch here's the exact procedure:

1. Place forward and reverse shift lever in neutral.
2. Disconnect foot throttle from governor so as to control engine speed by hand.

3. Install engine tachometer.

4. Lock clutch in neutral position (depress magnet valve, raise neutral stop lever and lock clutch lever in this position with "C" clamp then release magnet valve).

5. Operate engine by hand at 900 rpm. The pressure on gage will register pump pressure only.

6. Release clutch lever, allow it to return into hydraulic drive position.

7. Operate engine at 900 rpm. The pressure on gage will register pump pressure plus turbine pressure.

(TURN TO PAGE 139, PLEASE)

**Linking the farm with your
doorstep is a 400,000 ve-
hicle fleet serving . . .**



The Milk Route

THE MILKMAN is so much a part of our everyday life that we seldom stop to think of his economic significance. Yet collectively the milk industry uses more trucks than are used in the delivery of any other single commodity.

According to the Milk Industry Foundation, there are now close to 400,000 trucks in the dairy fleet, including those used for farm to market hauls and from processing plants to consumers.

The Foundation estimates that there are about 35,000 plants processing milk and dairy products and approximately 20,000 distributors. More than half of the distributors operate only one route, while the figure for processing plants includes retail ice cream manufacturing establishments.

58 Million Quarts Daily

With the average American now consuming about 12 per cent more milk than before the war, milk comprises about 17 per cent of the

foods which he purchases each year. There are 58 million quarts of fresh milk and cream distributed daily through door step deliveries and stores.

Trucks serve a number of functions for the milk industry: they pick up "raw" milk from the farms, deliver it to the processing plants; they deliver processed milk and milk products to retail outlets, institutions, other plants for additional processing, and to the consumer's door step.

A report of a survey conducted in 1955 by "The Milk Dealer," an Olsen publication, offers some interesting facts about milk distribution fleets. Based on replies from 1153 milk dealers, the survey may be too small to be indicative of all milk fleets, but it does show some trends.

For the companies participating in the survey 68.5 per cent of all routes were retail and 31.5 per cent were wholesale routes. Trucks used on retail and whole-

sale routes averaged slightly more than 47 miles a day, while refrigerated semi-trailers averaged almost 167 miles a day. Average number of stops ranged from a low of 103 to a high of 229. It is obvious, of course, that the door-to-door retail delivery units would tend to have more stops than the wholesale units, which deliver more products at each stop.

Dairy Fleet Equipment

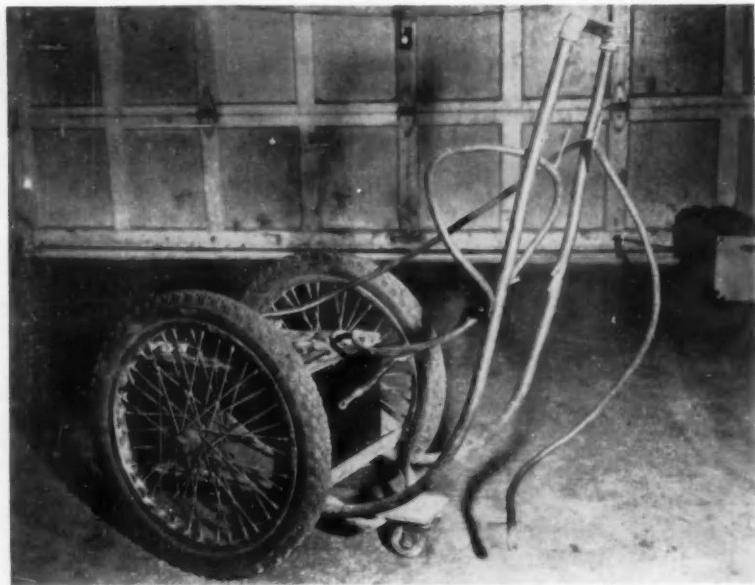
Average life-span for all trucks covered in the survey was estimated at 7.5 years. Average age of equipment now in use was 2.24 years for trucks, 2.28 years for tractors, 3.7 years for tank trucks and 5.8 years for tank semi-trailers. The figures for age of equipment appear to be rather low for the industry as a whole.

Of trucks used on retail routes, about 25 per cent were insulated and about 15 per cent had refrigeration units. On wholesale routes,

(TURN TO PAGE 182, PLEASE)

Battery Buggy

Two 6-volt batteries are pushed about on a special buggy. The wheels came from a low-slung tradesman's delivery pushcart. Frame and handle were made of piping, and stability was given to the rig by a trailing swivel castor. 3/16-in. bars were welded to the handle and bent into hooks on which to loop the cables.



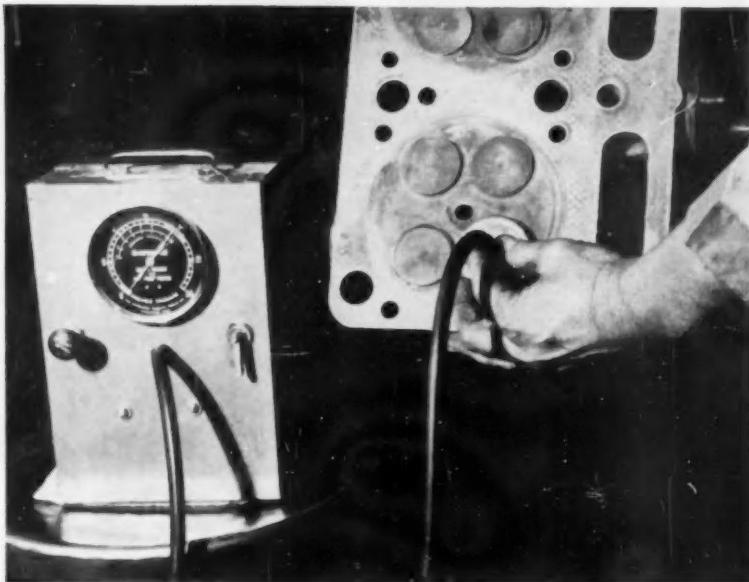
Shop Hints

from Super Service

Bearing Basket

Four compartments in a gear basket help keep wheel bearings cataloged. The basket was made of expanded metal sides. Top framing was rigged of bar stock and the bottom of angle iron. The wheels came from a mechanics floor creeper. Heavy tags on key rings label the contents of each section. Key rings are hooked into the expanded metal. Keeping assemblies separated this way saves a lot of time in tagging individual units, eliminates the possibility of mixing bearings.





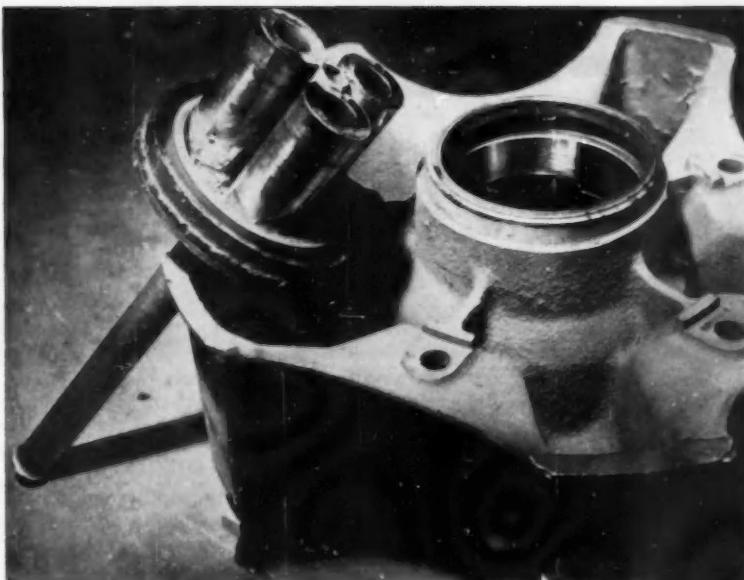
Valve Test Kits

Several kits for testing valve seating are used in the motor shop. These apply vacuum over the valves and should register 20 to 23 in. vacuum. In each kit a small 6-volt electric motor and vacuum pump is mounted inside a metal box. These are the kind sold in office supply stores for keeping important papers, and measure about 6 x 10 x 3 in.

The gage is mounted on what is normally the bottom of the box, and the suction tube brought through below it. The tube is fitted with a suction cup having a soft rubber gasket—a steering lever shaft seal from a White truck, having a metal disc soldered to its upper side. This suction cup has a small relief valve on top, closed off with the mechanic's thumb during testing. Removing his thumb breaks the vacuum without having to rock the cup.

Super Service Motor Freight, Nashville, Tenn., has built some interesting shop tools to speed PM and simplify various service jobs. Nine of these "inventions" are presented here and on the following two pages in a series of pictures and captions. The tools,

all made or adapted by the mechanics themselves, are aimed at putting maintenance of Super Service's new diesel fleet on a standardized basis. Duplicates of these time-savers and cost-cutters are in use throughout all shops in the Super Service system.



Wheel Seal Driver

A special driver was devised to install wheel seals evenly and smoothly and to avoid hammering directly on the seal itself. Three wrist pins from a diesel engine make a guide as they fit snugly into the wheel housing. The pins were spaced and supported by a piece of steel tubing set between them and tack welded at their ends.

The base of the wrist pin assembly was welded to a flat circular plate mounted on the bar used for the driving handle. A used wheel seal was fitted around the base of the wrist pins and welded also to the circular plate. This seal is the impact surface applied against the wheel seal being installed. A narrow section of tubing was welded to the outer edge of the circular plate to fit over the flange on the wheel housing and help hold driver in line.

Shop Hints . . .

Continued from Page 71

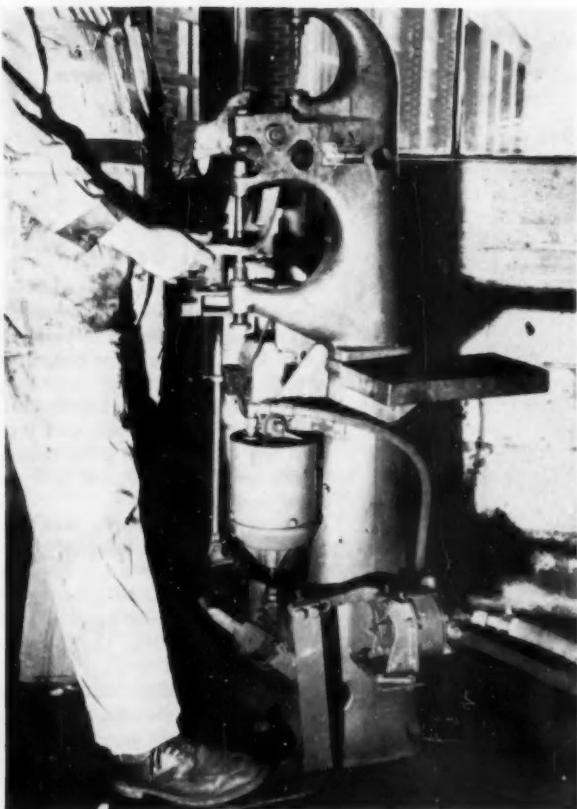
Rivet Exploder

Another electrical gadget was devised to apply quick heat to explosive rivets. A 6-in. length of $\frac{3}{8}$ -in. copper tubing was fitted with a wooden handle. A single lead-in wire from a 6-volt battery runs up the side of the handle to connect to the copper tubing with a set screw. Handle, wire, screw and the base of the tubing were then wrapped in mechanic's tape. The carbon core of a flashlight battery was inserted in the front end of the tubing, which was crimped slightly. The trailer is grounded back to the other terminal of the battery. When the carbon tip is applied to the head of an explosive rivet, it fires within five seconds. A mechanic reports he can drill, fit and rivet a patch with



this exploder in the same time a regular iron takes to heat up, and he doesn't have to worry about a hot iron laying underfoot. This device also works as a soldering iron. The firm's repair trucks all carry it now for use on jobs out of reach of civilization. It can be used on 12 volts,

too, though the carbons last much less than their normal life of three or four months with six volts. This tool is not recommended, of course, for production work. Its value is chiefly that of providing a quick heating method for such jobs as patching of panels, replacement of loose rivets.

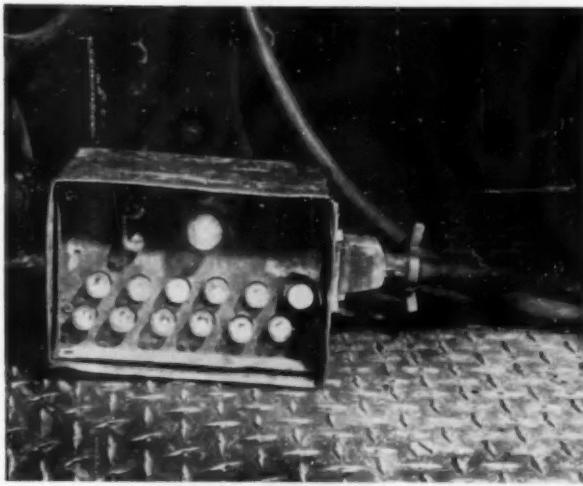


Air Drive for Rivet Machine

The rivet machine was changed from foot operation to air drive by addition of air brake valves. A pad was welded to the foot lever used to apply the pressure for setting rivets as well as for removing old rivets. An air piston chamber was mounted on the machine pedestal above the foot lever. A clevis on the piston rod was bolted to the pad. No oil is used in the chamber, which was connected by hose to an air valve. This in turn was hooked into the shop's compressed air line. The air valve was mounted low on the right side of the pedestal. A piece of flat bar was bolted at one end to the operating arm of the valve and was welded at the bottom to a plate that serves as a foot pedal.

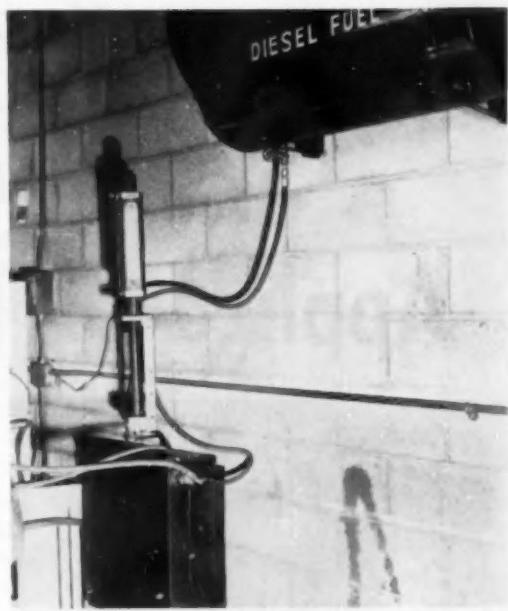
This plate pedal is at least 8 in. wide so the mechanic can hit it every time without taking his eyes off his work. The forward edge of the plate was rolled down slightly to suit the angle of the foot when resting on its heel. Chief merit in the air drive is that all rivets in a shoe are set with uniform pressure after the proper adjustment is made for the first rivet, according to the type of shoe.

The actuation valve is an old foot valve built on a frame at the base of the riveter and connected to a treadle made from flat iron. Power is supplied by a regular air brake push rod and an old air chamber. A door engine from a bus may work as well. Travel of the piston is determined by the location of the push rod on the original foot-operated lever. It should be as short as possible.



Light Circuit Tester

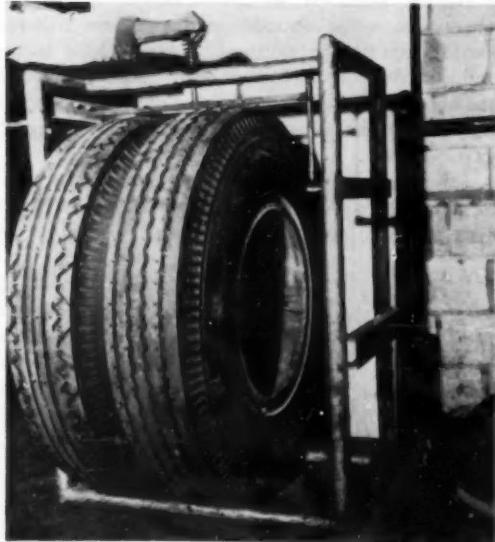
A box was made to test the complete lighting circuit on a tractor without hooking up to a trailer. It has a bulb to match every light on a trailer. Two rows of bulbs are for running lights, a big bulb is for the stop light, and a pair are for the turn indicators. The box has plugs at both ends, one to receive the older cables with square connections, the other for the newer round plugs. The double row of bulbs are needed to provide proper resistance in the circuit.



Diesel Fuel Meter

With the aid of Cummins Engine Co. fieldmen, the shop set up a diesel fuel metering device. This is in the dynamometer room and is used for testing engine fuel consumption efficiency. There is a fuel storage tank set above a flowmeter, which in turn is above a float-controlled feed chamber. All are mounted on the wall.

One line from the feed chamber is hooked into the fuel pump on the truck. Two hoses carry excess fuel back to the feed chamber again from the truck overflow. Thus the float operated valve in the feed chamber is affected only by the actual amount of fuel burnt in the truck. Fuel flowing into this lower tank through the flowmeter from the storage tank above must therefore equal the amount of fuel consumed in the truck. A small light bulb has been set in the back of the flowmeter so that it can be read from the record table several feet away. This whole metering device successfully points out in minutes or hours many inefficiencies that take days to be exposed by over-the-road records.



Tire Matching Stand

A simple tire matching stand was made of $2\frac{1}{2}$ -in. pipe braced with welded channel iron crosspieces. A single pipe is centered across the top of the stand at the highest point of the tires. Two bottom pipes are spaced just wide enough to permit tires to barely clear the floor. The gage is a steel bar, $\frac{3}{4}$ -in. square,

with a ring or washer welded to each end. These rings slide up and down guide bars mounted at either end of the stand. The gage bar is suspended by a $\frac{1}{8}$ -in. stem, tacked to its upper side and passing through the top pipe of the frame. A heavy steel spring holds the gage bar normally up to the pipe by forcing

against the gearshift knob handle at the top of the stem. Pressing on the handle forces the gage down. The guide bars keep the gage bar level. Therefore space between the gage bar and one tire or the other indicates the pair do not match. When this occurs, a better match has to be found to get efficient tire use.

System Maintenance Applied to Two-Way Radio



PM Check List

Good preventive maintenance requires a complete system check at least every three months. To make this check, you should:

1. Clean and dust thoroughly.
2. Check primary voltage circuits.
3. Measure power output of transmitters.
4. Measure sensitivity of receivers.
5. Check meter readings at the metering positions of transmitters and receivers.
6. Check audio output of receivers and audio input to transmitters.
7. Check operation of all relays.
8. Measure frequency and deviation of transmitters.
9. Check and adjust frequency netting of the entire system.
10. Check all accessories; control heads, cables, microphones, pilot lights, etc.
11. Check the antenna system.
12. Check and adjust remote control levels.
13. Check power supply output voltages.
14. Actually make an operational listening test of transmission and reception.

By Joseph Jatis

Assistant to National Service Manager, Motorola, Inc.

Expert considers primary power source.

CONTINUOUS operation of an efficient, dependable and reliable radio communications system requires regular attention to maintenance. It may be true that some radio communication systems will operate with very little attention. Nevertheless, to insure continued good performance of the radio communications equipment, it is necessary that a program be developed for periodic checking or testing of the entire system.

Any preventive maintenance program, to be successful, must be based on "system maintenance." All radio communications systems include integrated assemblies. A failure in any one of these would constitute a failure of communications. However, there are three major factors in a radio communications system which require attention; (1) the primary power source; (2) the unit assemblies and (3) the antenna system. A systematic maintenance program should include a periodic check on all the factors constituting a radio communications system.

Primary Power

Batteries seldom go dead without warning. They usually fail after a long period of undercharging or overcharging, lack of water, poor connections or old age, with many indications of the approaching end. From the radio technician's point of view, the voltage available at the battery terminals under load is the telling point. A fully charged lead-acid battery under a given load may show a measured voltage of approximately 6.4 volts in the case of a 6-volt battery and 12.8 volts in the case of a 12-volt battery. An old



Mobile radio speeds pick-up and delivery most when it is kept in top operating condition with an efficient PM program

unit assemblies, antenna system in attaining a sound PM program

sulphated or undercharged battery may show voltages of only 6 volts or lower.

These are battery terminal voltages, not the voltage present at the units. The terminal voltage at the units will probably be .5 to .7 volts lower when a transmit current of about 40 to 60 amp is being drawn. One of the good methods of checking primary power trouble is to measure battery voltage both at

the terminals of the battery and at the equipment. An immediate drop in voltage of more than .2 volts measured at the battery on a short transmit cycle would indicate a battery in poor condition. A drop of more than .7 volts measured at the units would point to troubles in the primary circuit—cable, fuse block, relay or chassis return.

(TURN TO PAGE 128, PLEASE)

PM check begins at the primary power source—the battery and connections



Good service equipment speeds checking of unit, results in a better job



With cargo containers (immediately behind bridge) mounted on new deck, Pan-Atlantic's *Ideal X* makes trial run



OPERATION "Fishy - back," the movement of truck trailers aboard ships, will reach a milestone next month when Pan-Atlantic Steamship Corp. begins moving trailer bodies on ships between Houston and New York.

This is the first step in a gigantic venture being projected by Malcolm P. McLean, head of the

Coastwise "Fishy-Back" Ready for

parent McLean Industries, Inc. and his brother James K. McLean, president of Pan-Atlantic. Now headquartered in Mobile, Ala., both will be remembered as founders of McLean Trucking Co. of Winston-Salem, N. C.

In the initial service, two modified T2 tankers will be used. In addition to their regular cargo of petroleum products, the tankers will each be able to carry 58 trailer bodies. Dismounted from their chassis at dockside, the trailer bodies will be loaded by large cranes on a specially constructed cargo deck which has been superimposed over the tanker's regular deck. The loaded trailer bodies will be remounted on chassis at their destination. The Brown and Fruehauf trailers used in the initial operation are 33 ft long, have 40,000 lb capacity. Each tanker has a deadweight tonnage of 16,500.

Weekly Service

The ships will offer weekly service out of each port. Transit time is approximately six days, while the ships can be unloaded and reloaded with new cargo in one workday.

At present, Pan-Atlantic expects to handle cargo from within the drayage limits of the Manhattan and Houston metropolitan areas. Future plans call for ex-

panding the service to an area within a radius of 40 miles. Rates will be approximately 15 to 20 per cent below truck rates from New York to Houston and will be based on prevailing rail-water or all water rates.

Both full trailer loads and ltl shipments will be handled. Full loads will be loaded at the shipper's plant or warehouse and ltl shipments will be loaded at a terminal near Pier 16 in Houston and at receiving stations in the Greater New York area. The two tankers, the "Ideal X" and "Almena," are the beginning of what the company hopes will be an expanded service to other

coastal ports with additional tankers equipped with the extra deck.

"Captive" at Present

Only Pan-Atlantic cargo will be moved in this service, making it in effect a "captive" operation, similar to rail-controlled movement of trailers on flatcars. However, the major "Sea-Land" program, using roll-on, roll-off vessels, calls for moving trailers for trucking companies licensed to operate between cities served by the trailerships.

While it is possible under the present system to handle interline shipments, with another operator's tractor towing the Pan-Atlantic

New Life for Domestic Ship Operation

Sparked by McLean's original announcement, several other varieties of "fishy-back" service are in the planning stage or in operation. As described in this story, they include TMT Trailer Ferry (Southeastern U.S.—Caribbean), Alaska Trainships (Seattle-Alaska), American-Hawaiian Steamship (intercoastal), Puerto Rico Railroad & Transport (New York—Puerto Rico). Also commented on is the renewed interest in ocean transport of railroad cars, such as performed by Seatrain Lines (Atlantic and Gulf coast ports) and Suwanee Train Ferry (Florida—Cuba). In this field, plans are being made by American Liberty Steamship (Texas—north Atlantic ports), Transportation Utilities (New York—Florida) and Trainships (Texas—north Atlantic ports).

Launching

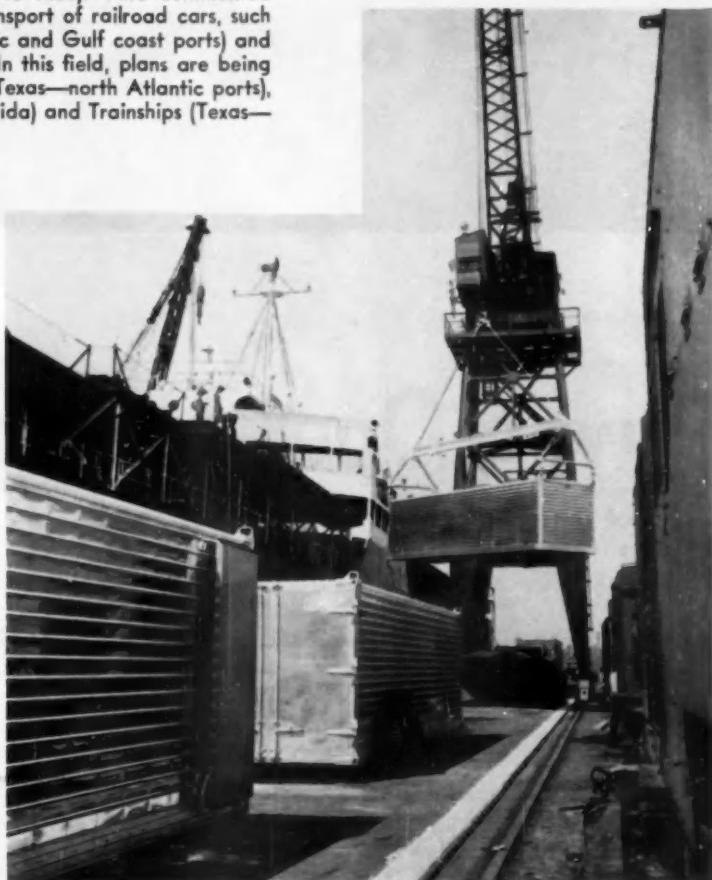
demountable trailer, this type of business will not be solicited at this time. However, shippers will be able to send their own trailer loads from areas beyond Manhattan to the Pan-Atlantic receiving stations where the goods will be reloaded in the special trailer bodies for shipment.

Larger Ships Planned

The full-scale Pan-Atlantic Sea-Land program calls for eventual construction of seven large roll-on, roll-off type trailerships, each capable of carrying 288 fully loaded trailers. Total cost of these vessels is now estimated at about \$72 millions. A government certificate of necessity has already been granted for these ships, and, according to Pan-Atlantic's president James K. McLean, contracts for their construction will be awarded soon. It is expected that the first of these large trailerships will be ready for service about 18 months after the contracts are awarded.

Plans call for the ships to
(TURN TO PAGE 158, PLEASE)

Crane lifts container onto deck during tests at Bethlehem Steel shipyard. In regular operation, containers will be transferred directly from flatbed trailer to deck. Six pins on bottom permit "latching" container to trailer and to deck of ship (bottom view)





Workshop session considered highways, taxes, transportation policy changes

Private Operators Look at Roads,

Private Truck Council's Cleveland meeting last month brought forth sharp comment

LAST MONTH some 300 members and friends of the Private Truck Council set out for Cleveland and the 17th annual convention. They spent two days in the usual rounds of Workshop Forum, Meeting the Consumer and the Manufacturer, luncheons, receptions and business sessions.

They elected Harry Mathews of Armour and Co. as president, and they made A. B. (Bud) Gorman of Esso the first chairman of the board the Council has ever had. They broke bread wth some pretty influential representatives of industry and government. Among them:

Highways and Taxes

Louis B. Seltzer, editor of the Cleveland Press who told them that the axle mile tax was not working out in Ohio. He said that money collected by the bill has not con-

tributed a single thing to improving the State's highway program as its sponsors had promised. He said that approximately \$27 million in revenues had been collected since the axle mile tax became law in 1953, but that "not one penny of this money has been used for its original purpose."

"It is conservatively estimated," he said, "that the loss in license fees alone to Ohio, resulting from the transfer of registrations, runs to around \$2,000,000 a year. Add this to the loss of around \$1,500,000 a year in revenues from state fuel taxes, and it totes up to a whopping \$3,500,000 of revenues that Ohio lost in 1955 alone as a result of the axle mile tax."

Arthur C. Butler, director of the National Highway Users Conference, said that most highway users believe that an expanded federal road program is imperative, but at

the same time they are strong supporters of state sovereignty.

He said that 11 national organizations have recently signed a statement in support of a federal highway program and of necessity a tax legislation to pay for it, "provided such tax legislation is equitably applied so as not to place an undue burden on any segment of highway transportation." He indicated that a recent bill introduced by Fallon (HR 8836) would provide around \$25 billion for the interstate system in the next 13 years and would increase present federal aid for the other systems approximately \$25 million annually during the same period. Money for the interstate system would be matched on a 90 per cent federal and 10 per cent state ratio and on a 50-50 basis for the other federal aid roads. One provision with which the highway users will take



Manufacturer Meets Consumer panel
discussed transmissions, steering, tires

Taxes and Equipment

on current issues and trends in today's fleet picture

sharp issue, Butler believes, is the federal freeze of truck sizes and weights.

Matt Triggs, of the Farm Bureau Federation, issued an imposing warning relative to the federal government's encroachment on state authority and responsibility in any legislation involved in the highway program. He did not agree that the states need help from the federal government in financing an expanded program.

Non-federal expenditures are increasing, he said. "In 1947 non-federal expenditures were \$2.5 billion. By 1955, they had increased to \$6.4 billion . . . which is as sharp an upward trend as we can find in our economy." Triggs criticized many of the bills under consideration in that they allow the federal government to regulate such factors as sizes and weights of vehicles and even wages and

hours of those engaged in highway construction. He warned that federal control follows federal money.

Senator Warren B. Magnuson, chairman of the Senate Interstate and Foreign Commerce Committee, assured the private truck operators that they had the right to carry their own goods in their own vehicles and should be free of economic regulation. The President's Cabinet Committee Report, he said, was based on the idea that because there is now a great deal of competition between carriers, the Interstate Commerce Act should be changed to recognize such competition and to serve the public interest by preventing common carriers from having too much unregulated competition.

There is much confusion, however, he said, and there would be more if the new suggestions were

(TURN TO PAGE 155, PLEASE)

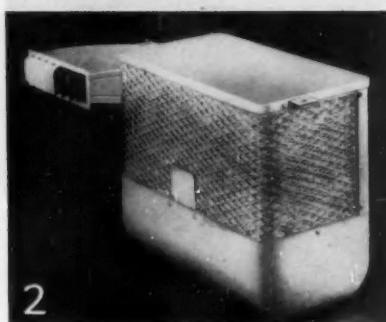


Included among the officers elected at the PTC meeting were Harry Mathews, above, as president and A. B. Gorman, below, as the council's first chairman of the board





1



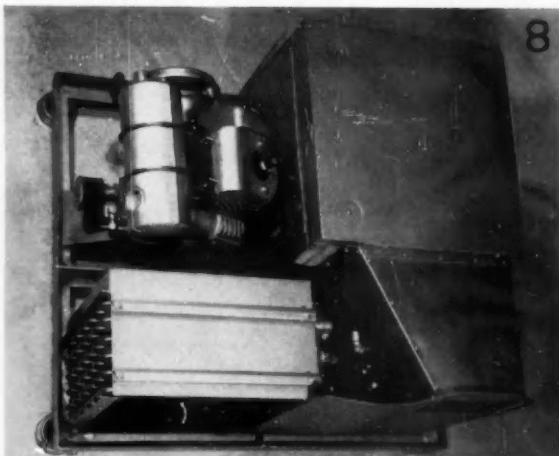
2



3

Air Conditioning Moves into the Fleet Field

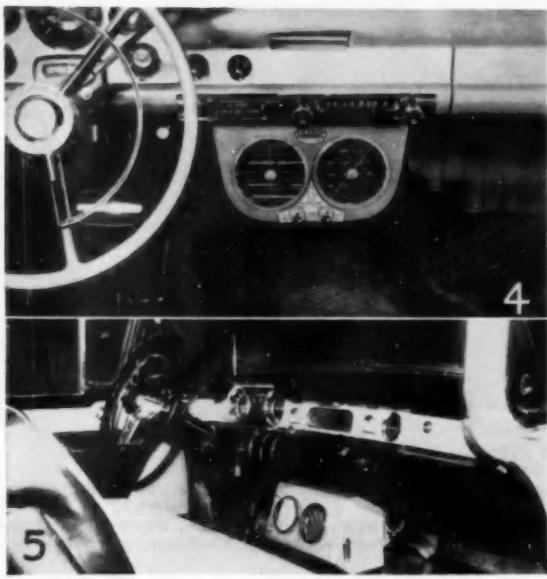
For truck and passenger car fleets, cool driving is here. Problem is in selecting



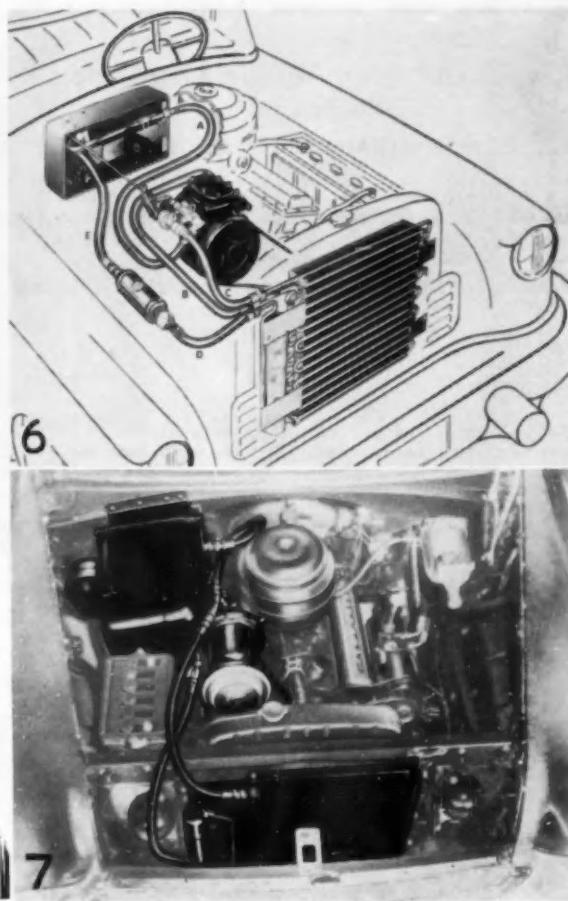
8



9



Vehicle air conditioning equipment can be a simple evaporator-type cooler or a complete refrigeration system. Evaporator-type air coolers include models that clamp on the door (1), mount under the dash (2) or mount on the back of regular or sleeper truck cabs (3). Evaporator component of complete refrigeration systems can be under-dash mounted (4 and 5) or placed in vehicle's trunk. Connected to these evaporators is a fan belt-driven compressor and a condenser unit, usually mounted ahead of the radiator (6 and 7). Designed especially for truck cabs, one self-contained unit comes "packaged" with its own power source (8-9)



the units that suit your operation

VEHICLE AIR CONDITIONING is moving out of the luxury class and into the fleet field, especially in the southwest. One result of the trend has been introduction of several new units in the market, along with a certain amount of confusion among truck and passenger car fleet operators as to what's available and what it will do.

Best way to measure the value of air conditioning is to compare the dollar loss in driver productivity as outside temperature goes up against cost of the equipment. For example: A hot driver quickly becomes a tired driver, is more likely to become involved in an accident. If he's comfortable, he doesn't make as many stops along the way and maintains a faster schedule. In some cases, air conditioning makes sleeper cab operation possible where it would be out of the question under usual prevailing temperatures. These con-

siderations deserve special emphasis in connection with today's trend toward a more compact tractor. Also, don't overlook the boost in morale and pride in equipment that results when the company shows a concern for driver comfort.

What's Available?

Two basic types of air conditioning equipment are available to fleet operators. Simplest is the air cooler. Illustrated here are typical models for (1) mounting on vehicle door, (2) under-dash mounting and (3) mounting on rear of regular or sleeper cabs. These units provide air averaging 10 deg cooler than outside temperature depending on the amount of space to be cooled inside the passenger car or truck cab and how hot it is outside.

Greater temperature control can be had in the more complete refrigeration system that cools and dehumidifies the air. Units of this type have three major components—compressor, condenser and evaporator. Illustrated are two typical passenger car installations (6 and 7) together with under-dash mounted evaporators (4 and 5), as well as a self-powered unit designed especially for truck cabs (7 and 8). Passenger car

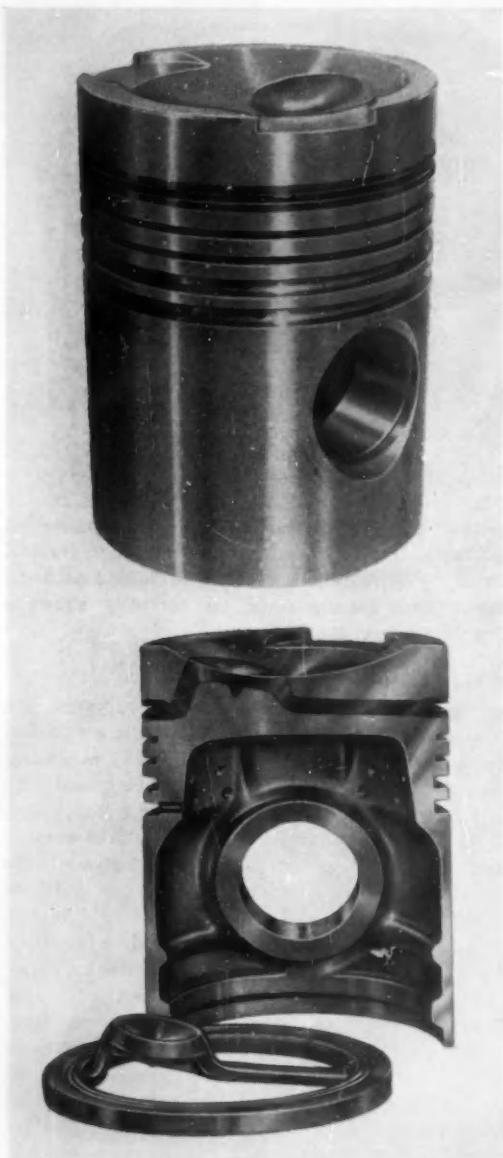
(TURN TO PAGE 112, PLEASE)

Question and answer conference with H. G.

**Reynolds of United Engine & Machine Co. reveals
some interesting data on bi-metallic pistons.**

**If you are having troubles like these, you may
want to investigate this type of piston design**

Dualoy piston has a Niresist top ring carrier insert to reduce head burning and top ring failures



Without naming engines, here are four representative examples of ring failure in the

Bonded Pistons

QUESTION: What is a bi-metallic piston and what is the difference in bonding techniques?

ANSWER: Bi-metallic describes a class of piston. Bi-metallic pistons can be any piston using dissimilar metals, the two metals being constrained either mechanically or chemically. A mechanically bonded piston would be a piston with an insert which—while it may be cast—still depends on a mechanical design for its bond.

Molecular bonded pistons use a chemical bond assuring a molecular wedging that disposes of any possibility that there will be a separation. There are no interfaces in a molecular bond (chemical bond), as the two metals in all areas of interfacing have combined in molecular structure to give a density that is neither one or the other, but a combination of both. Such a mass has not yet yielded to any of the forces of combustion, because the molecular bonded insert remains as an integral and integrated part of the mass.

Bonded Piston Use

QUESTION: Where or when should the fleet-man consider using this admittedly more costly piston?

ANSWER: The simplest answer is when his rigs lose power or compression. But the obvious and simple answers do not properly answer this ques-



top ring groove. It is a safe assumption that any damage to the fit toler-



ance of the top ring groove will eventually result in the condition illus-



trated in these four examples. Each has been taken from a different engine

for Heavy Duty Service

tion. If our information is correct, more engine overhauls are due to piston failures than any other automotive part. It is common knowledge that all-aluminum pistons in heavy-duty rigs, in certain types of engines are almost an operational hazard that has as its only advantages the increased power and better operating efficiency to offset it. Despite this, operators were willing to accept 60 and 70,000 miles as piston life, and eat the cost of overhaul as operational advantage. Almost invariably, the cause of failure in these all-aluminum pistons was "excessive wear and/or failure of the top ring groove."

Ours had just as many of these all-aluminum failures as any other manufacturer, so this does not apply to any particular piston.

Whenever piston life in heavy-duty equipment is below the life expectancy of conventional passenger-car pistons in conventional passenger-car operation, an opera-

tor should realize that he is not using pistons designed to meet the more strenuous demands of today's equipment. Can anyone say a piston is more costly if it eliminates an overhaul?

If an operator has preventive maintenance schedules of 60,000 mile inspections, and one critical part is the criterion of interval, and then a new design of that critical part doubles the interval, and this new design which costs approximately ten per cent more saves the cost of one overhaul, keeps the equipment on the road with ton-mile revenue—where is the element of "cost" of the part involved? For the fleet operator, the slightly higher price he pays for a bimetallic molecular bonded piston is only a fraction of the cost he must pay in shop costs, to tear down an engine.

Head Burning Problem

QUESTION: What will this piston do for the operator who is ex-

periencing trouble with head burning and top ring failures?

ANSWER: Top ring groove failures and head burning do not have related causes although they may occur in the same piston. Head burning is usually a reflection of the type of fuel injection system used, and is the result of a "hot-spot" created by continuous excessive heat in a very small area. Head burning from this cause is corrected with a Niresist button or disc located at the critical spot, to receive the full effect of this type of fuel injection system.

This button or disc is located with spider legs from the ring insert's inner periphery, so that it will contain all of the attack at this "hot-spot." The half section of a "hot-spot" piston shows (1) the spider supported button in a Niresist insert before casting, and (2) the cross section to give detail of placement and reinforcement to the integrated assembly.

New PRODUCTS

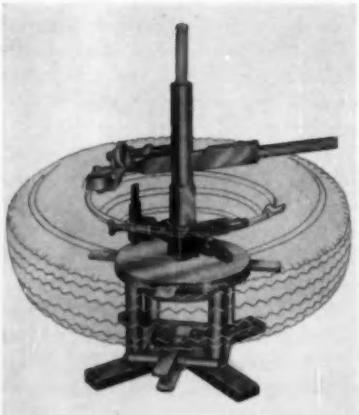
The latest developments in parts, accessories, tools and equipment for the fleet field, described in brief for your convenience

P1. Oil Seal Tool

Chicago Rawhide Mfg. Co., Chicago, says it has available a simple, rugged and easy-to-use tool for seating the seals quickly and accurately. Tool is accompanied by a set of 12 convertors to fit all commonly used sizes of front wheel bearing seals. The manufacturer also supplies a check-chart, showing the correct size of convertor and oil seal.

P2. Tire Changer

Coats Co., Fort Dodge, Iowa, is making a new tire changer for tubeless truck tires. Coats says it also can be used for conventional tires whether of the open or Budd type. Feature of the new machine is its tilting action which allows the upright portion of the machine to be tilted over on its base so that heavy wheels can be slipped onto the center post without lifting. Acme screws and a lever-operated jack center the wheel and hold it tight for mounting and demounting. For tubeless truck tires, polished rollers on the take-off tool facilitate removal.



P3. Vehicle Cleaner

Black & Decker Mfg. Co., Towson, Md., announces a unit of complete equipment for cleaning vehicles both inside and outside, the "Vitri-Glaze" system. Included are a new No. 65 vacuum cleaner, a heavy-duty automatic polisher, three new "Vitri-Buff" bonnets, and six 1-gal cans of new formula "Vitri-Glaze," plus free items available only with the purchase of the complete system: a "PoliShop" cart to carry and house the polishing equipment, and several accessories for the vacuum cleaner. The new No. 65 vacuum cleaner removes up to 3 1/2 gal of liquid or 1/2 bu of dry material before emptying is necessary. Maneuverability is achieved with a large, sturdy handle, two 8-in. rubber wheels, and a castor.

P4. Dispatching System

Radio Corp. of America, New York City, announces a simplified radio dispatching system designed to help motor carriers and other users of mobile radio to utilize and control rolling stock to maximum advantage. The system is built around a systematized card rack to enable dispatchers to determine at a glance the immediate destination, schedule, and load of each truck out on pickup or service calls.

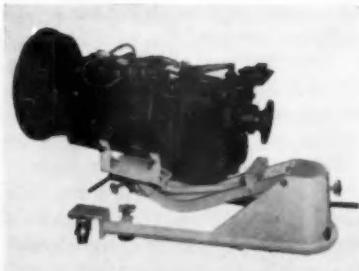


P5. Battery Charger

McColpin-Christie Corp., Los Angeles, Cal., announces a new battery charger and tester that enables tests on any type 12-volt battery with a single operation. Regardless of state of charge, 6- or 12-volt batteries can be tested on the spot. Fast charging of batteries with the "Chargalyzer" uses a self-adjusting charging system. Select 6 or 12 volts and the rate adjusts itself. A slow finishing charge automatically follows the fast charge.

P6. Transmission Dolly

Cam Tool Co., Oakland, Cal., has introduced a new transmission dolly. Hydraulic controls move a 13x14-in. sliding transmission platform forward at any desired angle, independent of the dolly frame, to align accurately for inserting spline. Position lock holds dolly to the floor when removing or installing transmission. Dolly is equipped with portable hydraulic jack for raising and lowering, plus a hand wheel for adjusting the tilt of the platform. Free swiveling, free rolling, 4 in. heavy duty casters enable operator to roll transmission and differential to work bench and then adjust to convenient working height. Drilled platform accommodates brackets for heavy differentials, comes equipped with universal cradle.





USE THIS POSTCARD for NEW PRODUCT INFORMATION AND FREE PUBLICATIONS

Circle numbers on the postcard corresponding to items you are interested in. Return postcard promptly for additional details. See also free publications descriptions on page 88.

THIS POSTCARD VOID AFTER JUNE 15, 1956

March, 1956
Reader's Service Dept. COMMERCIAL CAR JOURNAL: Please send me free additional information on items described in this issue, the code numbers of which I have circled below.

FREE LITERATURE		NEW PRODUCTS									
L1	L6	L11	L16	P1	P6	P11	P16	P21	P26	P31	P36
L2	L7	L12	L17	P2	P7	P12	P17	P22	P27	P32	P37
L3	L8	L13	L18	P3	P8	P13	P18	P23	P28	P33	P38
L4	L9	L14	L19	P4	P9	P14	P19	P24	P29	P34	P39
L5	L10	L15	L20	P5	P10	P15	P20	P25	P30	P35	P40
											P45 P50

Print Your Company Name

Company Address City Zone State

Your Name Your Position

We are: Fleet Operator Number of trucks Buses In Fleet

Truck Dealer Truck Repair Shop Other Classification

FIRST CLASS
Permit No. 36
(Sec. 34.9 P.L.&R.)
New York, N. Y.

BUSINESS REPLY CARD

No Postage Stamp Necessary if Mailed in the United States

POSTAGE WILL BE PAID BY

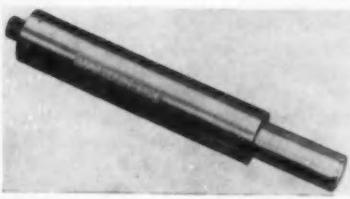
COMMERCIAL CAR JOURNAL

P. O. Box 75,

Village Station,

Readers Service Dept. New York 14, N. Y.





P7. Liquid Spring

Taylor Devices, Inc., North Tonawanda, N. Y., announces a liquid spring with a built-in shock absorber using liquid compressibility. Design of this combination spring and shock absorber incorporates an integral hydraulic levering principle which permits the development of spring forces as low as 600 lb with a 2-in. stroke plus energy absorption as a shock absorber. Wide extremes of spring force are possible.

P8. Shop Press

Owatonna Tool Co., Owatonna, Minn., is offering a special "do it yourself" 17½-ton press. All material including pins, bolts, spacers, ram holding plate, channels, and angles are pre-cut to size and shipped broken down. All you do is drill the prick punched holes, paint and assemble. Press design and materials are the same as found in the OTC "Power-Twin" standard press, Model No. 106-A.

P9. Tire Tester

Bishman Mfg. Co., Osseo, Minn., has designed a new tubeless tire tester. The tire is rolled onto the tire handler, which is mounted on the front of the tank, and then swung into the tank for testing. The tire is rotated easily on rollers on the bottom of the handler by means of a roller and hand crank at the top. Because the lower rollers don't rest on the bottom of the tank the dirt that settles to the bottom is not stirred up. The tire and wheel are submerged far enough to check for leaks in the casing, air seals, valve and wheel. Tubes up to 50-in. diameter can also be tested in the tank according to the manufacturer.

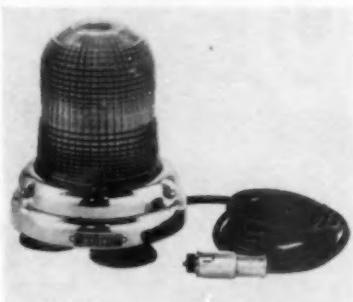


P10. Mirrors

Electroline Mfg. Co., Cleveland, Ohio, announces a line of western style rear view mirrors featuring stainless steel construction.

P11. Emergency Blinker

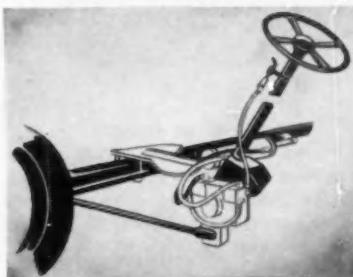
Griffin Lamp Co., Hamilton, Ohio, announces a new emergency blinker that can be fastened to any flat surface by means of rubber suction cups. It is designed for quick use on overturned or disabled vehicles or other



road obstructions. It operates off the regular vehicle electric system, either by plugging into the cigarette lighter or, as optional equipment, by means of clips attaching directly to the battery terminals. Mounting base features three rubber suction cups which permit attachment to any flat surface.

P12. Power Steering

Air Applicators, Inc., Portland, Ore., has available for all trucks with existing air supply a power assist steering development which can be installed in two hours or less. Unit does not affect existing air supply and requires only ten bolts for complete installation. The installation kit comes from the factory complete and ready to install, includes cab control valve, valve-actuated pitman arm, axle bracket, ram, tie-rod clamp and brackets, all hoses and necessary fittings, and step-by-step installation instructions. In the event of an air supply failure, the system automatically reverts to manual steering.



P13. Air Wrench

Ingersoll-Rand, New York City, has developed an air-operated, torque-control "Impactool" designed to run a nut to any desired torque, then automatically shut itself off. The new tool incorporates the torsion bar principle to torque control. When required torque is reached and nut running resistance is equal to the stress preset in the torsion bar, the impact mechanism rebounds instantly and trips a rubber-faced shutoff valve.

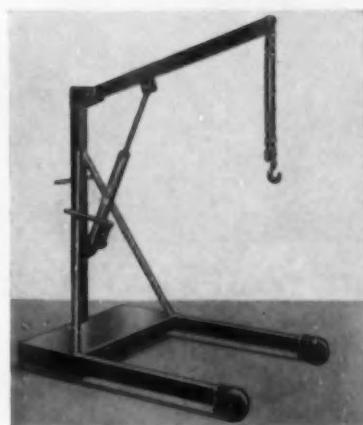
P14. Heating Signal

Signal Bolt, Inc., Indianapolis, Ind., announces an engine heating alarm, "Signal Bolt." It replaces any one of the head bolts in an engine and attaches by wire to the horn. Metal-to-metal contact inside the block keeps constant guard on actual engine temperature. Inside "Signal Bolt" is a heat-sensitive, bi-metal insert. When the engine reaches a pre-set temperature, below the point where damage sets in, the insert makes electrical contact and sets off the horn.

P15. Hydraulic Crane

Star Machine & Tool Co., Minneapolis, Minn., has in production a ½-ton hydraulic crane. Two roller bearing wheels on fixed axles provide proper tracking, and two swivel

(TURN TO NEXT PAGE, PLEASE)



New Product Descriptions

Continued from Page 85

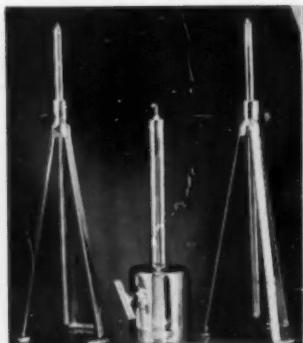
casters facilitate steering. Wheels are positioned to protect against tipping. Boom raises 88 in., drops to 28 in. and is 45 in. in length.

P16. CO Detector

Bacharach - Industrial Instrument Co., Pittsburgh, Pa., announces a pencil-size carbon monoxide detector shows at a glance if in the air being tested carbon monoxide is present in any concentration which is dangerous for either occasional, short-time or long exposure. The instrument shows the presence of carbon monoxide concentration as low as 40 parts CO per million parts of air. The indicating tube is a glass tube containing a yellow carbon monoxide sensitive chemical which turns brownish-gray when carbon monoxide passes through the tube.

P17. Run-Out Gage

Hickok Electrical Instrument Co., Cleveland, Ohio, now has available a new gage to measure radial run-out on tires, wheels and brake drums. The gage determines the amount of out-of-roundness (measured difference between a high and low point) of a tire and wheel assembly. Testing uses are on eccentric wheels or rims, bent rims, eccentric wheel studs or bolt hole circle, out-of-round tires, improperly seated tires, flat spots due to excessive wear, eccentric brake drums. Gage also tests for wobbly wheels and lateral run-out.



P18. Trailer Aligner

Triplex Trailiner Tool Co., Akron, Ohio, announces a new trailer axle aligning tool set. While it is especially designed for axles equipped with wheel oil seals, the makers say

P19. Vehicle Hoist

Globe Hoist Co., Philadelphia, announces addition of a new floor mount model to its line of "Frame-Kontact" hoists. According to the company, it



can be installed anywhere by simply bolting its base plate to the floor, no excavation is required. Eight lag screws or through bolts anchor the two base plates to the floor. Superstructure is welded to the two cylinders and pushed upward by the plungers.

P20. Safety Brake

Safety Brake Corp., Oklahoma City, Okla., announces a safety brake claimed to assure positive braking



it may be used on trailers not yet equipped with oil seals. Adapters are available for Trailmobile 5-spoke and Shuler wheels. Use of tool eliminates necessity for removing wheels or oil hub caps in aligning trailer, say the makers.

power under any conditions when regular hydraulic systems fail. According to the manufacturer the device functions when any unequalization occurs in the braking system—either a slow leak in the lines, at the wheels or a direct break in the lines. When this or any other damage to the braking system occurs the manufacturer claims that the unit functions by dividing the brake system into two sections. The damaged section is sealed off, leaving the other section in perfect working condition, thus assuring either front or rear wheel brakes.

P21. Flasher Light

Trippe Mfg. Co., Chicago, announces a 360 deg flashing light. Known as the "Busy Bee," this light employs a spring mounted bulb which vibrates with motion of vehicle. This adds to flashing effect, although light is provided with an off-and-on flasher in addition. Stands over 7 in. high and can be supplied with lenses in red, blue or amber.

P22. Lube Cabinet

Alemite Division, Stewart-Warner Corp., Chicago, announces a new wall-type "Alemiter." It is available in three or two pump units, features a method of drum-changing whereby a simple pull of the "lift" control raises the entire cover assembly and pumps automatically and as a unit. They lock in the "up" position with plenty of clearance to change drums. In returning to operating position, a pull of the "pump" control actuates all pumps. It is equipped with both high pressure and low pressure pumps for economical delivery of every type of lubrication service—gear lubes, automatic transmission fluids and even tough chassis lubricants.

P23. Oil Filters

Wix Corp., Gastonia, N. C., announces large capacity "Hevi-Duty" oil filters for either external or internal mounting on trucks and heavy equipment. The WF-750-C in heavy chrome plate and the WF-750 in neutral cream with maroon mounting straps feature a bar-type cover handle in place of cover bolts, eliminating the need for wrenches during cartridge changing. Double center-tube prevents drainback without valving. Neoprene-type cover gasket gives positive, all around seal. In addition, three "Hevi-Duty" oil filter cartridges for "750 series" filters are pro-

(TURN TO PAGE 172, PLEASE)



WEIGHT-SAVING "WC" LINE
MODERN, powerful and light-weight highway tractors for states that have restrictive gross weight laws yet liberal in regard to axle weights. The "WC" Whites keep tractor weight down . . . boost payload.

HIGH-CUBE "3000" LINE
WEIGHT DISTRIBUTION and favorable length are wonderful White "3000" advantages that have boosted "high-cube" payloads for operators as much as 30%.



**Regardless Of How Restrictive
Your Road Laws are . . .**

White Has the Complete Line Answer

THERE'S a brilliant new dimension in highway truckpower! It's the White 9000. It's new in payload opportunity! New in power and performance! And what's more—it's all new in chassis design! New in exclusive driver safety and comfort features! It's all new—this White 9000! With four new Mustang Gasoline Engines. Available in diesel, too! Engineered to your operating demands.

And Now—The **WHITE 9000**

with 90-inch dimension from front of bumper to back of cab for maximum "L" dimension for total gross weight. Handles 35 ft. square-nose trailer within 45 ft. limit with three different king pin settings—24", 30" and 36".



THE
WHITE MOTOR
COMPANY
Cleveland 1, Ohio



For More Than 55 Years The Greatest Name In Trucks

Fleetman's LIBRARY

For free publications included in this list of new fleet maintenance and safety literature, use the reader service postcard

Tubeless Tire Manual

Here is a compact and detailed review of the servicing, repair and advantages of tubeless truck tires. Published by B. F. Goodrich Co.'s Tire and Equipment Division, its title is "All You Need to Know about Tubeless Tires for Trucks."

The 12-page booklet describes how to mount, demount and repair tubeless truck tires, tells about recommended tubeless rims. Photographs or drawings illustrate each topic. Special features of tubeless tires in regards repair or retreading are also reviewed. Circle L 1 on the postcard on page 84 for your free copy of this convenient manual.

Two-Way Radio Regulations

This handy 14-page booklet is an abstract of Federal Communications Commission rules and regulations governing land transportation radio services, including two-way mobile radio for trucks. It is available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., at 10¢ a copy. Ask for "Federal Communications Commission, Rules and Regulations, Title 47, Telecommunication, Chapter 1, Part 16," Catalog No. CC1.7:16/4.

Federal-Aid to Highways Digest

National Highway Users Conference has just made available a convenient 24-page summary of how the federal-aid to highways system works.

Complete with maps and charts, it covers such topics as the highways themselves, how the money gets to the states, what the states must do financially and designwise to get the money. For your free copy of "Federal-aid for Highways," circle L 2 on the postcard.

Hydra-Matic Transmission Analysis

A very thorough review of the development and operation of the General Motor's "Hydra-Matic" automatic transmission is contained in this 20-page manual.

The analysis is divided into three parts. First is a concise description of the "Hydra-Matic's" major components, general operation and development from 1939 through 1955. Second part is a detailed look at the new design

1956 "Hydra-Matic." Final section covers operation of the "Twin Hydra-Matic" truck transmission.

An excellent selection of cross-section photographs and schematic drawings keep the text completely understandable. To get a free copy, circle L 3 on the postcard.

Better Highways Promotion

Ford Motor Co. has available to fleet operators a digest of its 120-page volume "Freedom of the American Road." The 12-page condensation highlights the important features of the larger publication. It covers, with specific examples from cities around the country, what individuals can do—by themselves and through community action—to promote better roads. Circle L 4 on the postcard on page 84 for your free copy of this digest.

Dump Body Glossary of Terms

Prepared by the Engineering and Technical Committee, Hydraulic Hoist and Steel Dump Body Manufacturers division, Truck Body and Equipment Assn., this 8-page publication lists and defines terms used in describing hydraulic hoists, steel dump bodies and lift gates. It will help you present a more accurate description in selecting new equipment. For your free copy, circle L 5.

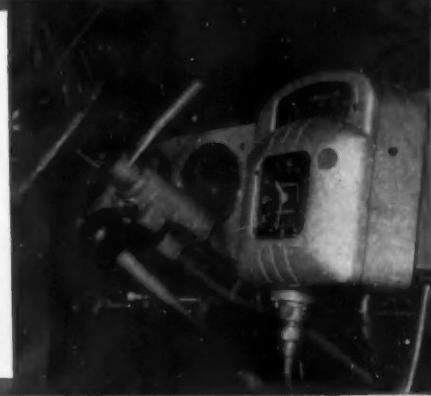
Parts Storage Manual

Parts storage, handling and records are covered in this 279-page book written by Benjamin Melnitsky and published by the Chilton Co. Fleet maintenance men will get many ideas from it on how to streamline procedures and cut costs in storage and handling of parts. Copies are \$6.00 each and can be ordered from the Book Division, Chilton Co., Chestnut and 56th Sts., Philadelphia 39, Pa. Title is "Industrial Storeskeeping Manual."

ATA Lighting Specifications

Signal-Stat Corp. has available without charge to fleet operators copies of American Trucking Assns. Recommended Equipment Specification No. E-3-1955 on vehicle lighting (reviewed in CCJ, Jan., page 92.) Circle L 6 on the postcard on page 84 for your copy.

(TURN TO PAGE 168, PLEASE)



"Tachographs

**really pay off in dollars and cents
by controlling speed"**

says: George Silver, Safety Supervisor

Campbell 66 Express, Inc., Springfield, Mo.

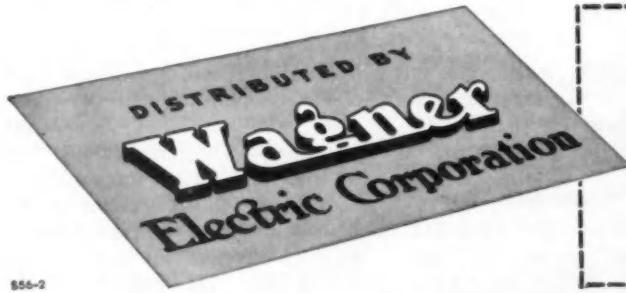
Excessive speed can cost you money in undue tire wear, engine maintenance and fuel consumption. Like Campbell 66 Express, Inc., you can gain more economical and efficient over-the-road operation with Tachographs. They also help maintain schedules and encourage better driving habits.

Tachographs can be mounted on the dash board and connect directly to the speedometer cable. A wax-coated chart is inserted inside the durable aluminum case, and accurately and permanently records such vital trip information as:

- When engine started
- How long it idled
- When vehicle was in motion
- How fast it traveled
- When it stopped and for how long

Illuminated dials show time of day, total mileage and m. p. h. (Tachograph models which indicate and record engine r. p. m. are also available.) A red warning light on the Tachograph signals the driver when a pre-determined speed is exceeded.

Yes, Tachographs do add up to increased fleet economies and greater road, cargo and driver safety. They will do the same for every vehicle you operate, too. Send the coupon below for your free copy of Wagner Bulletin SU-3—it tells the whole "inside" story.



556-2

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • CoMoX BRAKE LINING • NoRoL • AIR HORNS • AIR BRAKES • TACHOGRAHS • ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL CRANE BRIDGE BRAKES

CAMPBELL 66
EXPRESS, INC.

Wagner Electric Corporation
6400 Plymouth Avenue
St. Louis 14, Missouri

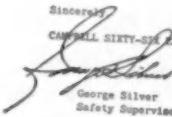
Gentlemen:

We have been using Tachographs on our vehicles for a number of years (each of our 230 tractors is Tachograph-equipped), and have had an excellent opportunity to analyze the results of their use.

The recorded information from trip charts keeps growing in importance with our continued use of these instruments. Through analysis of average speed, we determine our power units' load-carrying ability. Charts show exact driving time for various trips and the efficiency of our loading and unloading operations.

Tachographs really pay off in dollars and cents by controlling speed. Engine maintenance and tire wear are reduced. The value of Tachograph information in court cases is incalculable. We feel that it has greatly benefited our safety record.

It is our regular practice to put a Tachograph in each new tractor we purchase.

Sincerely,
CAMPBELL SIXTY-SIX EXPRESS, INC.

George Silver
Safety Supervisor

"HUMPIN' TO PLEASE"

Wagner Electric Corporation

6476 PLYMOUTH AVE., ST. LOUIS 14, MO.

Please send a copy of Bulletin SU-3.

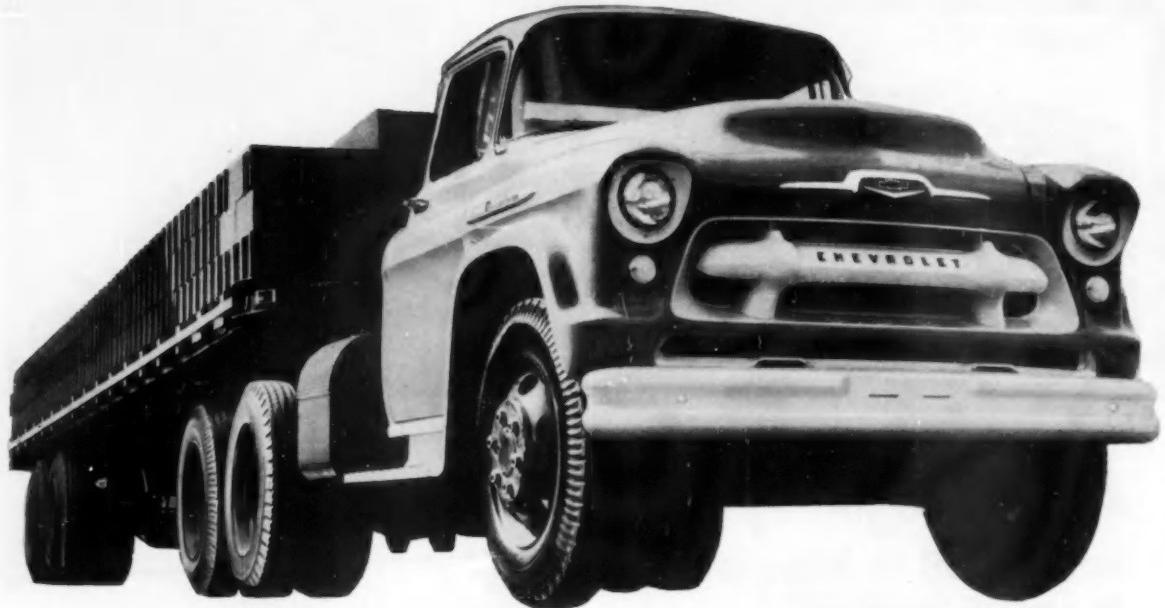
Name and Position _____

Company _____

Address _____

City _____ State _____

We operate _____ Vehicles
(NUMBER)



CHEVROLET has moved into a new field of heavier truck models with the addition of four new series of 2½-ton trucks to its 1956 line. The new models, heaviest the company has ever built, boost Chevrolet's top GVW rating to 32,000 lb, while GCW ratings now range up to 50,000 lb. (First models in the '56 line, covering 65 half- to two-ton vehicles on 15 wheelbases were announced late in the February issue, page 90.)

The additions to the line include 21 models on eight different wheelbases. They feature a new 322-cu in. 195 hp V8 Loadmaster engine, a 6-speed fully automatic transmission, a wide assortment of axles ranging up to a new high-rated capacity of 18,000 lb, optional tandem axle equipment on three different wheelbases and two new 60-passenger school bus chassis, largest yet offered by Chevrolet.

The new models mark the first time the company has offered tandem axle equipment as an option. The tandems provide several of the units with a capacity nearly double that of any previous Chevrolet truck. Tandems have two independently operating 15,000 lb capacity axles and feature walking



Chevrolet

beam suspension with enclosed two-stage "pile" springs. Single-speed axles have a standard 6.17-to-1 or optional 7.2-to-1 ratio.

Automatic Transmission

The "Powermatic" transmission, optional on all the new heavy models except the school bus chassis, features a built-in

hydraulic retarding device and power take-off openings on both sides for installation of special equipment. The retarder operates from a pedal in the conventional clutch position. It sets up an hydraulic action in the transmission with an effect of up to six times engine drag. This reduces service braking requirements on most

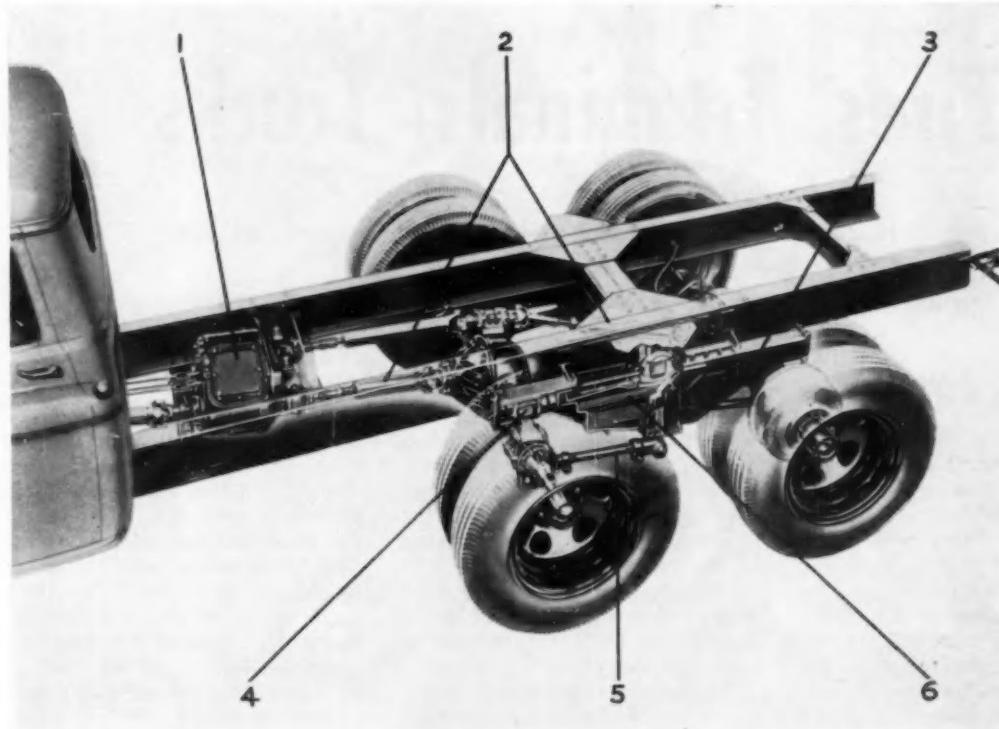
Top left. This 2½-ton tractor with tandem axle has 174-in. wheelbase

Bottom left. New 322-cu in., V-8 Loadmaster engine develops 195 hp

Below. Optional tandem axle features (1) power divider controlled from cab, (2) tubular drive lines, (3) a walking beam spring housing, (4) walking beam axle attachment, (5) new-type torque rods and (6) enclosed two-stage "pile" springs

New models with 195-hp, 322-cu in. V-8

engine have automatic transmission with
built-in retarder. Tandem axle with im-
proved suspension is offered as option



Goes to 32,000 lb GVW

downgrades. The transmission automatically determines a shift schedule according to load, grade, speed and other factors. The driver may operate the selector to three speed ranges—drive for normal operation; intermediate for heavy traffic or hilly country; or low for traction or controlled power.

With the new engine, Chevrolet now has 10 power plants in its '56 line, five V-8's and five "6's." The Loadmaster has a short stroke-to-bore ratio of .8 to 1. Stroke is listed at 3.2 in. and bore at 4 in., with a 7.7 to 1 compression ratio.

Models equipped with the optional tandem units have the

Loadmaster V-8 engine with 13-in. coil spring clutch, heavy-duty five-speed transmission, combination three-speed auxiliary and a power divider. The power divider is operated from the cab by a selector lever and permits dual-drive with positive 50-50 power division or economical single-axle

(TURN TO PAGE 146, PLEASE)



Inland Slashes Costs of Tires, Terminals, Trucks

Inland Motor Freight and Pacific Highway Transport, its subsidiary, report on a three-way saving in one year of \$170,000

AT INLAND Motor Freight, savings in operating cost due specifically to a three-part program totaled \$170,000 in 1954 as compared to 1953. For Inland alone, savings were \$100,000 in '54 as compared to '53, while Pacific Highway Transport—a wholly owned subsidiary—netted \$70,000.

Savings have resulted from improvements made in three departments—(1) tire maintenance and service, (2) terminal freight handling, and (3) better road equipment.

Tire Savings

The most spectacular improvement and the least expensive to effect has been the savings realized in cost of tires. In 1954, IMF saved some \$44,000 in tire costs alone, while PHT saved about \$20,000. Tire costs are generally more of a factor with IMF road equipment—which is heavier—than PHT's. In 1953, 667 new tires were bought by the two organizations, while only 279 were bought in 1954. This decrease took place despite the greater tire mileage required in 1954, some 82 million tire-miles compared to 79 million tire-miles for 1953.

This improvement was reflected

in turn in a reduction of tire cost per mile to .56 mill per tire-mile, or approximately half a mill. That cost was the average for all the approximately 600 units operated by the two companies.

IMF sums up the methods used to achieve this low tire cost in the simple rule to "check the air in every tire every day."

According to IMF's experience, "If a tire does not have the amount of air that it should, it means greater wear and an earlier breakdown. The closer the operator holds his tires to the specified pressure, then, the longer will be the life of the tire. When we check a tire that is supposed to have 80 pounds, we bring it to that pressure, not 78 or 82. Perhaps more important is to balance the tire pressure on opposite sides of the truck. A tire with five more pounds of air than the rest of the tires may take not just five per cent more than its share of the load, but 50 per cent more of it. That, too, will break it down rapidly."

Tire Checks

Responsibility for the tire check is in the hands of the tire maintenance supervisors at the companies' three main terminals at Seattle,

Spokane, and Portland. They are required to check the tires on every truck that comes into their terminals every day. After checking a tire and adjusting the pressure if necessary, they write the date and code letter for their terminal in yellow chalk on the sidewall. The chalk is a type that can be rubbed off but will hold up on the road for the required period of time in wet weather.

Tires are checked with regular tire gages that are calibrated once a week against a master gage that is kept at each major terminal. The master gages in turn are checked for accuracy once a year. Further control is maintained by spot checks which are frequently made of tires by company supervisors. Since the tire supervisors never know when their work will be checked they are alert to do their job thoroughly at all times.

Tire Records

Keeping detailed records of individual tire performance is important for the operator who wants to know as exactly as possible what he is doing, thinks IMF. Each tire purchased is assigned a reference number, which is branded into the

(TURN TO PAGE 148, PLEASE)

**HIGHWAY
TRAILERS**

USE **SHULER
AXLES**



THERE ARE NO BETTER AXLES, AT ANY PRICE!

Since 1915, Manufacturers of: *One-Piece* Tubular and Square Commercial Trailer Axles, Heavy-Duty Front Axles for Trucks, Busses, and Off-Highway Equipment, Low-Bed Machinery Trailer Axles, Heavy-Duty Vacuum and Air Brakes, Miscellaneous forgings.

SHULER AXLE COMPANY, Incorporated, LOUISVILLE, KENTUCKY

SUBSIDIARY OF FULLER MANUFACTURING COMPANY

SALES OFFICES in DETROIT, CHICAGO, OAKLAND and TULSA

WEST COAST WAREHOUSE
Oakland, California

SOUTHWEST WAREHOUSE
Fort Worth, Texas



COE Specifications

Model No.	GVW (lb)	Wheelbase (in.)	Engine	Hp	Transmission
140	14,500	142	BD-240	131	T9
181	16,000	154	BD-282	137	F51C
182	18,000	154	BD-308	150	F51C
202	20,000	154	BD-308	150	F51C
232	23,000	154	BD-308	150	F51C
284	26,000	154	RD-372	165	5A43
285	26,000	154	RD-406	175	5A43
305	30,000	154	RD-406	175	5A62
326	32,000	154	RD-450	182	5A62
367	36,000	154	RD-501	212	5C65 ¹
408	40,000	154	145GK	216	10A1120 ²
409	40,000	154	145GKB	240	10A1120 ²

¹-10CA65 optional. ²-R96 optional.

FWD Cab-Overs for 1956

New line designed for heavy-duty service includes 12 models with 14,500 to 40,000 lb GVW

A LINE of cab-over-engine trucks—12 models featuring 4-wheel drive and ranging from 14,500 to 40,000 lb GVW—has been announced by the Four Wheel Drive Auto Co., Clintonville, Wis. These models are designed for utility line construction and maintenance, highway maintenance and construction, oilfield operations, heavy construction hauling, and similar tasks.

The new cab-over-engine styles are available in all 4x4 weight classifications and also may be obtained for special 6-wheel-drive applications. The COE's range in

engine horsepower from 131 to 240 and vary in transmission speeds from 4 to 10.

Power Dividers

Standard center differential on all models is FWD's 50-50 power divider, which sends half the torque to the front driving wheels and half to the rear. A 1-to-2 power divider, proportioning torque one-third to front wheels and two-thirds to rear for trucks designed to meet special load requirements, is optional equipment in all but the smallest COE model.

Standard engines for all models

from 14,500 GVW to 36,000 lb GVW are the ED and RD gasoline-powered series. Two 40,000 lb GVW models have GK series engines. Engine is accessible between the cab seats, where the "doghouse" cover need only be removed for easy working on the engine.

Transmissions

Transmissions offered (as specified in the chart below) include four forward speeds and one reverse (Series T9), five forward and one reverse (Series F51C, 5A43, 5A62, 5C65), and 10 forward and two reverse (10A1120, 10CA65, R96). The R96 transmission (described in full on page 96, this issue) has a progressive high-low range.

All of the 12 cab-over-engine models feature FWD axle design and have tapered-front, heat-treated alloy steel channel frames for greater strength with less chassis weight. Frame and axle construction is engineered to the load requirements of each model.



Ever think of Snap-on as your "extra" employee at no extra cost?

Chances are you've seen a *Snap-on* man during the past few weeks. If you've been in the shop during one of his regular visits, you've watched him in action. More than likely you've heard some of the kidding he takes from your mechanics. But, you've seen them buy *Snap-on* tools.

A mechanic doesn't kid about the tools he uses — he depends on them for a living. That's why he welcomes the *Snap-on* man whenever this tool expert calls. The tools he sells, his wide experience, and his training in tool use often break

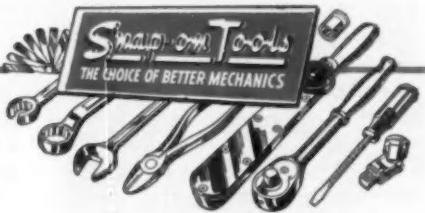
work bottlenecks, make "beating the rate" a cinch. It's like having an extra man on the payroll . . . at no extra cost to you.

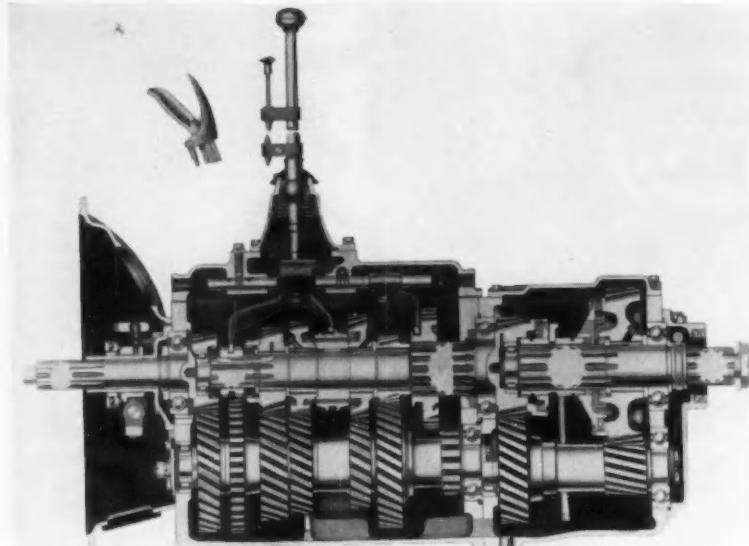
The more timesaving, money-making *Snap-on* tools there are in your shop, the easier it is for your mechanics to turn out the kind of work that means more customers, more profits. The next time your *Snap-on* man calls, ask him about the plan by which you can help more of your employees own and use *Snap-on* tools.

SNAP-ON TOOLS CORPORATION

8026-C 28th Avenue, Kenosha, Wisconsin

*Snap-on is the trademark of Snap-on Tools Corporation.





Fuller's New RoadRanger

All-air shift has 5-speed gear box, 2-speed auxiliary and one shift lever, gives 10 forward and two reverse speeds, eliminates need for gear splitting

The new R-96 and R-960 transmissions, just introduced by Fuller Mfg. Co., feature all-air shift with 10 forward and 2 reverse speeds. These all-air shift, 10-speed semi-automatic transmissions are further refinements of the former Models R-95-C and R-950-C which they replace.

The 10 selective gear ratios are evenly and progressively spaced, eliminating the necessity of gear splitting. Shifts are easier, quicker—in an average of 28 per cent steps. One-shift lever gives complete control of ratio selection.

Higher average road speeds are said to be possible; the engine operates in peak hp range with greater fuel economy. Range shifts are pre-selected, automatic and synchronized. Weight of the new units has been reduced by 60 lb.

Models consist of two sections—a 5-speed transmission with closely spaced ratios, and a 2-speed auxiliary with wider spaced ratios. The combination provides 10 forward speeds and two reverse speeds shifted with one lever.

The 10 forward speeds are se-

cured by using the ratios of the 5-speed section twice. The first time with the auxiliary section in low gear so that the ratios in the 5-speed section are compounded by the auxiliary low gear. The second time with the auxiliary section in high gear. The two reverse speeds are secured by using reverse in the 5-speed section through either high or low gear of the auxiliary section.

Use Shifting Pattern Twice

By using the 5-speed shifting pattern twice, the shift lever position for sixth speed is the same as first; seventh the same as second; eighth the same as third; ninth the same as fourth; and tenth the same as fifth. The evenly spaced gear ratios, which average 28 per cent steps, are both progressive and selective.

The auxiliary section is automatically shifted by air after pre-

(TURN TO PAGE 134, PLEASE)

Forty-truck Ford Fleet

Cuts costs with 100% Genuine Ford Parts!

*"We've found repairs a lot easier
with Genuine Ford Parts. They fit right.*

*And their long life has really cut
our repair costs. We're with Ford Parts
100%," says Hal Roy, President
of Hal Roy Appliance Service, Inc.,
Los Angeles, California.*

Throughout the country, fleet owners like Mr. Roy are boosting profits by standardizing their service operations on Genuine Ford Parts.

It's easy to see why. Genuine Ford Parts are made to the rigid specifications set by the men who built your Fords originally. Naturally, they install easily, quickly cut costly "down-time." And they're made to last longer in your Fords, too. They undergo grueling track-tests before being approved for manufacture.

Standardize your fleet on Genuine Ford Parts. You'll find they're available at the Ford Dealer's near you.



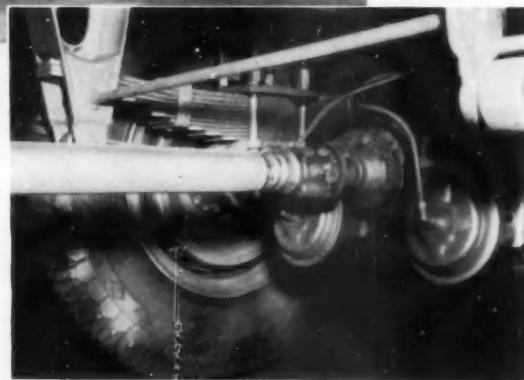
Hal Roy Appliance Service keeps its fleet fit with Genuine Ford Parts

KEEP YOUR FLEET ON ITS FEET





Under-floor reefer unit, above, is powered by drive shaft from trailer axle, at right



Dairy Fleet Swings to "Live" Axles

Trailer axle spins drive shaft to power reefer unit capable of holding a constant over-the-road temperature as low as minus 14 deg

By R. King, Superintendent of Transportation
Detroit Creamery Co., Detroit, Mich.

WITH TONS of perishable dairy products moving between our Detroit processing plants and out-of-town points each day, and with this phase of our activity steadily increasing, we are constantly faced with three major problems, to increase payloads on our trucks, to keep the loads adequately refrigerated while enroute, and to in-

crease handling efficiency at the transfer points.

In July last year we installed equipment which has been a big help in solving these problems. We purchased five 35-ft aluminum trailers, equipped them with Grico "live" axles and Kold Truk refrigeration units. Four of the five new units carry cases of milk between

Detroit and Ann Arbor, Mich., while the other one carries bulk ice cream to different out-of-town points.

With the lighter and larger aluminum trailers we gained an immediate payload increase of 25 per cent, using the same tractors which formerly pulled two 16-ft trailers in a train. The new equipment can carry 910 cases with a single-axle tractor, 1100 cases with a dual axle power unit. The ice cream unit can handle 6000 gal and operates as far as 137 miles from its home base.

Side Unloading

The new trailers have two large loading doors on the side. This permits direct simultaneous loading of two retail delivery trucks at the transfer points, speeding re-loading time. The milk trailers are

(TURN TO PAGE 146, PLEASE)

"20 Diesels Get Up To 225,000 Miles Before Overhaul With Cities Service C-300 Motor Oil!"

"We don't even have to grind the valves before then,"
reports Holdcraft Transportation Co., Sioux City, Iowa.



CITIES  SERVICE
QUALITY PETROLEUM PRODUCTS



Let JACK Do It

**They get lots of use in the shop when they
are chosen correctly, properly maintained**

LIKE EVERY other piece of equipment you use in your shop, lifting jacks are built to do a special job. And certain jacks are made to perform best on specific jobs and in specific places.

If you want a fast-working jack, for example, you would use the ratchet type, not the slower screw or hydraulic jacks. If you have to lift 30 tons, you wouldn't use a

jack with a 15-ton capacity unless you want your wife to collect your insurance.

Choosing a Jack

When choosing a jack, consider these factors:

1. Weight of load—Make sure the jack is strong enough to handle the load with safety.
2. Type of lowering—Some

By John J. Dixon

Chief Engineer, Duff-Norton Co.

ratchet jacks are made in either trip or ratchet lowering or a combination of both. Screw jacks are made in various types of manual or self-lowering models.

3. Speed of lifting or lowering—Determine how fast you want the job done, then pick the right jack. Ratchet types are the fastest, but are limited to lighter loads. Screw and hydraulic jacks are more powerful but slower.

4. Height of jack and raise required—for general purpose, it is best to select a jack having a fairly high raise so that a variety of jobs may be handled.

5. Weight—When a jack is used and moved often, select the lightest weight of the desired capacity. Many models with identical lifting power are made with either malleable iron or aluminum housings.

6. Constant service—if the jack is in constant use, consider speed of lifting and lowering, ease of operation, ease of handling, long life and protection against wear, ease of maintenance and repair.

7. For close quarters—the best jack for working in a narrow space is a small head jack. This type can be spotted squarely under the load and prevents undue strain on the jack mechanism. Where there is plenty of room, the large jack head provides ample area to grip the load.

8. Use of foot lift—Most ratchet and many screw jacks are equipped with foot lifts, a handy feature for getting a "toe hold" close to the ground.

Keep your jacks handy. Designate a spot where jacks are to be stored when not in use. If they are not readily located, it may seem easier to the worker to use his own muscles instead of getting a jack.

Don't use defective or unsuitable jacks or jack handles. Check your jacks and jack handles before using to make sure they are in good condition.

If the jack has been overloaded or strained, don't use it until in-

(TURN TO PAGE 124, PLEASE)

"Improved Operation... Practically No Maintenance"



VICKERS® HYDRAULIC POWER STEERING at Jacksonville Coach Company

"We are very much pleased with the Vickers Hydraulic Power Steering which we have on our Series 200 White Diesel Buses," writes J. M. Moore, Vice President and General Manager, Jacksonville Coach Company. "As of March 1, 1955, these 20 buses had a total of 2,621,175 miles with only two repairs to the Vickers Steering Boosters.

"The better maneuverability resulting from this power steering helps maintain schedules as the buses get through city traffic much easier . . . it also often helps avoid accidents. The reduced driver fatigue is reflected in improved safety records. Also, the

driver has no fear of loss of control resulting from a front tire blowout. Power steering is a refinement we propose to incorporate on all future equipment."

For all the facts about Vickers Hydraulic Power Steering, ask for Bulletin M-5106.

VICKERS INCORPORATED
DIVISION OF SPERRY RAND CORPORATION

1418 OAKMAN BLVD. • DETROIT 32, MICH.

Application Engineering Offices: ATLANTA • CHICAGO • CINCINNATI • CLEVELAND • DETROIT • HOUSTON • LOS ANGELES AREA (El Segundo) • MINNEAPOLIS • NEW YORK AREA (Summit, N. J.) • PHILADELPHIA AREA (Media) • PITTSBURGH AREA (Mt. Lebanon) • PORTLAND, ORE. • ROCHESTER • ROCKFORD • SAN FRANCISCO AREA (Berkeley) • SEATTLE • ST. LOUIS • TULSA • WASHINGTON • WORCESTER.

IN CANADA: Vickers-Sperry of Canada, Ltd., Toronto.

7171



Vickers Hydraulic Power Steering Booster does the actual work of steering. With the touch of only a finger the driver can steer the heaviest vehicle on or off the road. All road shock is absorbed by Booster and transmitted to the vehicle frame . . . there can be no kick-back at the steering wheel. Fatigue is reduced and driver efficiency increased.

**VICKERS hydraulic
POWER STEERING**
**is Effortless
Positive and Shockless**



Magnaflux Without Electricity

A NEW MAGNETIC particle inspection device that requires no electrical power has just been announced by Magnaflux Corp. of Chicago. This portable Magnaflux YM-5 Yoke Kit makes practical the inspection of critical parts or welds in hazardous areas.

The kit comes complete with metal storage and carrying case, and total kit weight is only 22 lb. The Yoke legs are hinged and the angle-cut tips rotate so that good magnetic contact can be made on almost any shape part. The magnetic pull is over 40 lb on a flat surface, while the yoke itself weighs just five lb. A spray gun, two powder bulbs, and wet-bath and dry powder magnetic particle materials are also included in the YM-5 Kit.

Use is simple. The Yoke is placed on the work-piece perpendicular to the direction of suspected cracks, and the inspector applies the inspection medium to the area between the legs. Indications of surface cracks will form immediately. Inspection proceeds at a rapid pace in a series of steps.

Either Magnaflux dry powder or liquid bath inspection medium can be used, but for best results the Magnaflux bath is recommended in most situations.

For further data on this "Magnaflux" kit, circle P 50 on the postcard on page 84.

Dana's Spicer Thornton "Powr-Lok" Differential

NEW LOCKING-TYPE differential, known as the Spicer Thornton Powr-Lok, is being produced by the Dana Corp. It will be offered for installation in light trucks and station wagons and is interchangeable as an assembly with present Spicer differentials.

In addition to unique design, as evident from the illustration, PowrLok is distinctive in that it is not of full locking type. Spicer has found it undesirable to permit sudden transfer of full engine torque to one axle shaft since that imposes severe shock loading leading to failure. Consequently, it is designed as a torque divider, providing sufficient traction torque to the non-spinning wheel and always a certain percentage of torque transfer to the wheel with poor traction. The relative amount of torque transfer depends entirely upon operating conditions.

Load capacity is increased over the conventional differential since the load is distributed both over the gear teeth and cone clutches. Moreover, the action is the same for both drive, and coast, whether in forward or reverse.

Conventional cross mounting of pinions is replaced by two individual cross pins with a slidable joint at the center, permitting each one to move independently although continuously engaged.

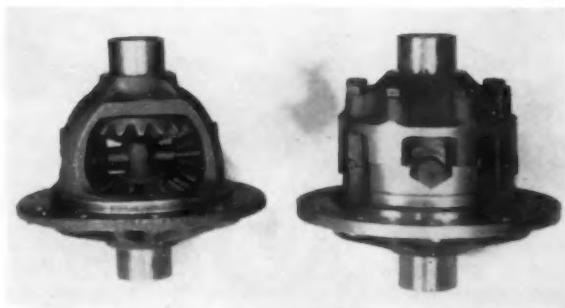
In operation, say in forward driving with full traction on both wheels, both cross pins move up on the ramp of the cam—a very slight amount dimensionally—to lock both clutch rings. When cornering, on the other hand, the pinion mates for the inner wheel are caused to rotate, and since they are restricted by the fixed gear, they cause the cross pins to move down the ramps, thus relieving the thrust load on the cone clutches. This permits the

outer wheel to turn faster as in a conventional differential.

A similar sequence of events occurs instantaneously when there is a marked difference in traction requirements between the driving wheels due to snow or slippery pavement or on rough roads. By this means the wheel with traction gets a greater percentage of wheel torque, although the wheel with poorer traction always receives as much torque as it can handle under the circumstances. Whenever there is slippage on one side, clutch pressure is relieved on that side and, consequently, there is no wear on the slipping members. By virtue of this, it is claimed that the mechanism is long lived and very reliable.

Generally speaking, the automatic functioning of the differential is said to provide vehicle safety and stability in high speed driving and cornering.

For further details on this differential, circle P 49 on the postcard on page 84.



Every working part in Midland's Power Brake Systems is thoroughly engineered and carefully tested to insure top performance.



2.

Midland Power Brakes are easily and quickly installed, come in complete kits for installation either at your nearest Midland distributor or in your own shop.



3.

Midland Power Brakes stop any legal load — quickly, easily, safely. Midland brake systems are designed and built with tremendous reserve power.



4.

Midland Power Brake Kits or parts — as well as service — are readily available through a national network of distributors, as well as representatives in most foreign countries. There's one near you.

WHEN you order new highway transport equipment, be sure to specify Midland Power Brakes — and specify Midland, too, when replacing or modernizing the power brakes on your present equipment. (Remember, too, that Midland makes a complete line of top-quality power brakes for passenger cars.)

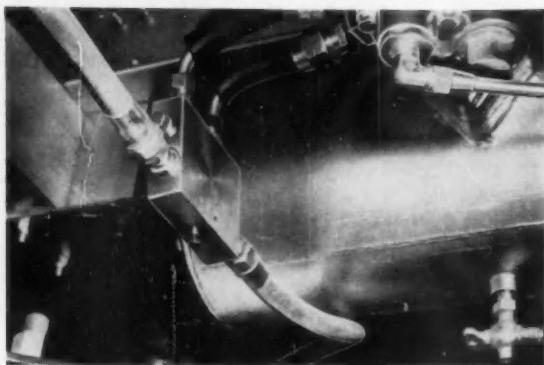
Yes, insist on Midland Power Brakes and enjoy real peace of mind!



THE MIDLAND STEEL PRODUCTS COMPANY

2641 E. MILWAUKEE AVE. • DETROIT 11, MICH.

Export Department: 38 Pearl St., New York, N.Y.

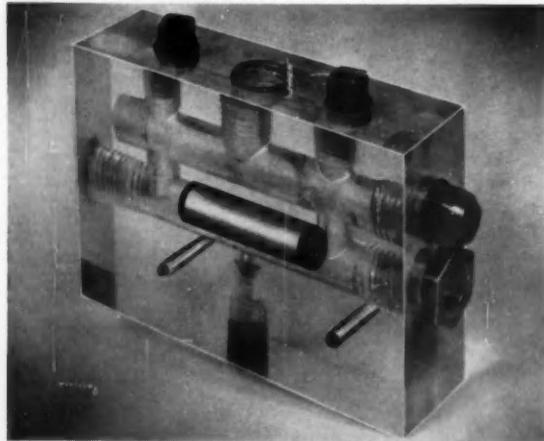


Brake Safety Valve

A NEW SAFETY device to prevent trucks and buses from running out of control when brake failures occur is integrated into the brake system of the vehicle and operates automatically to seal off the escaping air or hydraulic fluid when a leak occurs.

K & B Mfg. Co. of Oklahoma City makes two separate and distinct valves: 100-A for air brake systems; 200-H for hydraulic systems.

This valve is installed between the quick release valve and the brake chambers on each axle. (One valve protects each axle.) Protection is then afforded to each hose line and the diaphragm in each brake chamber. When a rup-



tured diaphragm or broken hose line to any wheel occurs, the reciprocal plunger action of the Safeguard Valve immediately seals off the air pressure to the defective brake and retains power for braking not only on all the other axles but on the opposite wheel as well.

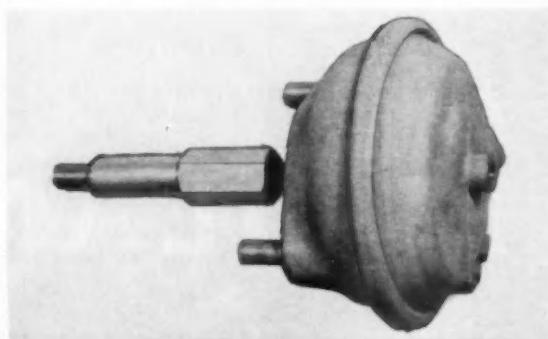
With the valve installed between the breakaway valve and the hose line leading to the brake chamber on each axle on the trailer, the action of the "Safeguard" valve is the same as described above. In case of a failure of any brake part on each separate axle it retains the power for braking on all other axles and on the opposite wheel of the affected axle.

For further data on this brake safety valve, circle P 48 on the postcard on page 84.

Ballistic Brake Actuator

BALLISTIC-TYPE brake actuators, based on a principle now in use in jet powered military aircraft, are offered by the Talco Engineering Co., Inc., Hamden, Conn., to provide emergency service brake actuation in the event of failure of air-operated brakes on motor trucks. The company also has a proposed system suitable for installation in hydraulic brake systems. Talco feels this equipment provides an answer to the proposed ICC regulations calling for an auxiliary emergency brake system for heavy duty vehicles.

Ballistic brake actuators are based on the principle of utilizing the gas pressure resulting from combustion of a propellant powder. They consist of small, light units installed in the service brake system as part of the pushrod assembly, normally functioning as the brake chamber pushrod. In the event of failure of the air system the



propellant charge is ignited by the electrical system of the vehicle, using either a manual switch or a foot-operated switch, drawing two-amp. current.

In operation, as ignition is initiated the pressure of the gases forces the brake actuator piston down the cylinder, acting against the slack adjuster as in the normal manner. Actuators are said to respond in three to six-thousandths of a second. They are available with different thrust capacities and various lengths of stroke to match the requirements of standard brake chambers.

Circle P 47 on the postcard on page 84 for further details on this new brake safety unit.

"Neck-Down" LP Gas Trailer



Delta Tank Mfg. Co., Inc., has announced design and production of 9400-gal water-capacity LP gas highway transports including a new "neck-down" model. The new neck-down transport, designed to lower the center of gravity by six inches, has a capacity of 8000 gal. of propane, holds a 34,878-lb payload.

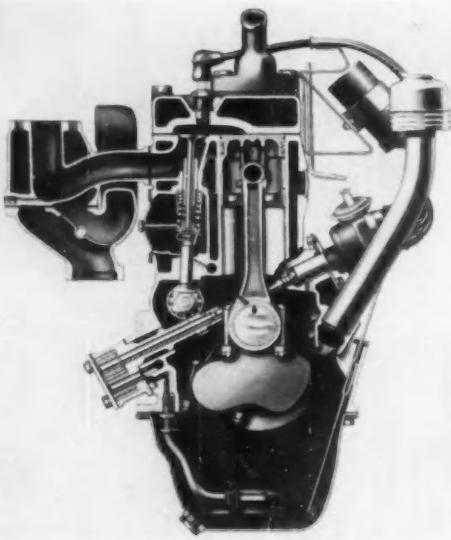
ATA WANTS IT*

Signal-Stat

HAS IT!

* New ATA Recommended Equipment Specification E-3-1955

THE PROBLEM:	To improve truck lighting and cure "Sitting-Duck" accidents.
ATA RECOMMENDATION: "The purpose of this ATA Recommended Equipment Specification is to establish uniform specifications for the wiring and lighting of commercial motor vehicles. It is intended that recommendations herein contained will be used when re-wiring old vehicles and also used as the specifications for wiring and lighting when new vehicles are being purchased. Safety, efficiency, performance and uniformity are the objectives of this recommended practice."	<p>3.09 Turn signals are lamps which indicate a change in direction by giving flashing warning lights on the side toward which the turn will be made. (SAE Class A, Type 1, only are to be used.)</p> <p>6.01 Front turn signals shall be of the double faced (amber to front, red to rear) Class A, Type 1, mounted in accordance with SAE mounting specifications except when impractical due to vehicle design.</p> <p>6.04 Turn signals shall be wired in such a manner that they will flash simultaneously to indicate vehicle disability.</p> <p>7.01 Stop-Tail photometric requirements shall be in accordance with the current SAE specifications.</p>
THE PRODUCT THAT DOES IT:  <p>Insist on <i>Sigflare</i> for all around signaling protection</p>	<p>SIGNAL-STAT SIGFLARE, the multi-purpose signaling system that conforms with every new ATA Lighting and Wiring Recommendation. It provides . . .</p> <p>A—The most powerful Class A, Type 1, directional signals on the market with Double Face Lamps for front mounting and rear lamps to suit your individual installation.</p> <p>B—The flare feature with positive pilot action that instantly and simultaneously flashes all 4 signal lamps to warn oncoming traffic that the vehicle is disabled.</p> <p>C—2 Stop Lamps as powerful as Class A, Type 1, signal lamps.</p> <p>D—2 Tail Lamps as powerful as the law allows.</p> <p>. . . all in one system with as few as 4 Lamps and 1 Switch—a specially designed heavy duty flasher for tractors and combinations and a range of Stop/Tail lights for every type of installation—all exceeding SAE specifications.</p>
For more information about <i>Sigflare</i> and a complimentary copy of the new ATA Lighting Recommendations, see your jobber, or write to:	<h2>Signal-Stat</h2> <p>DIRECTIONAL SIGNALS • SWITCHES • FLASHERS Signal-Stat Corporation, 523-539 Kent Ave., Brooklyn 11, N.Y., U.S.A.</p>



Studebaker's 245 Engine

A HIGH TORQUE, 6-cyl engine will be introduced in the Studebaker "Transtar" truck line this month. The 245-cu in. engine has a torque of 205 ft lb of 1200 rpm, and will be available in the $\frac{1}{2}$, $\frac{3}{4}$ and 1-ton pickup models.

A long stroke of $4\frac{1}{4}$ in. combined with a 3 5/16 in. bore accounts for the high power at low rpm.

For extra durability, the engine is equipped with forged steel rods of "I" beam construction and tin plated, cam-ground aluminum pistons. Standard compression ratio is 7 to 1 for maximum power on all grades of fuel. A 7 1/2 to 1 compression head is also available at optional cost.

With the addition of the "big six" engine, Studebaker will offer a selection of six engines for the trucking line. The power plants include Studebaker's two 6-cyl engines and four V-8 engines—the 224-cu in. 140- or 160-hp V-8s, and the 259-cu in. 156 or 175-hp V-8s.

Fruehauf's "Hasko-Struct"-Insulated Reefer

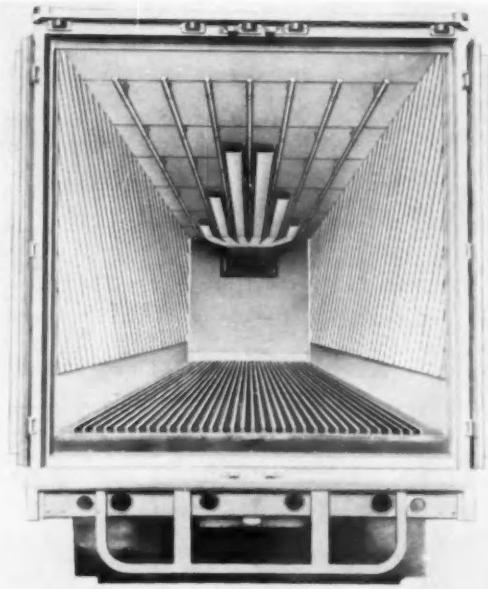
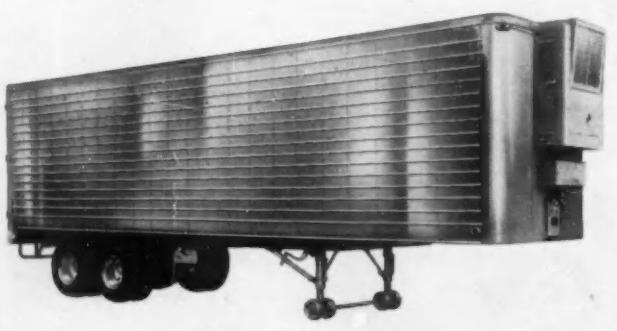
FRUEHAUF TRAILER CO. is announcing a new smooth aluminum panel refrigerator "Volume Van" which is said to provide 25 per cent more efficiency in its insulating qualities with 2 in. of insulation as compared with 3 in. on previous installations. This difference in thickness gives the new unit a gain of 5 per cent in payload volume. Weight is saved because of the inherent lightness of the "Hasko-Struct" insulation.

The new deluxe unit has a maximum size of 35 ft outside length, 34 ft $\frac{3}{8}$ in. inside length, and 83 5/16 in. inside height, with an inside width of 87 1/8 in. Minimum weight is 12,625 lb; which includes the RL-30 "Thermo-King" refrigeration unit. This is a 2 per cent saving in original weight as compared with former insulation plus, of course, the fact that this weight is maintained because moisture absorption is eliminated.

The insulation is a blue "Styrofoam" installed in panels with interlocking joints sealed with epoxy resin to form a solid continuous insulating wall not pierced by any fastenings or any other devices capable of conducting heat. The "Styrofoam" is locked against the outer wall of the

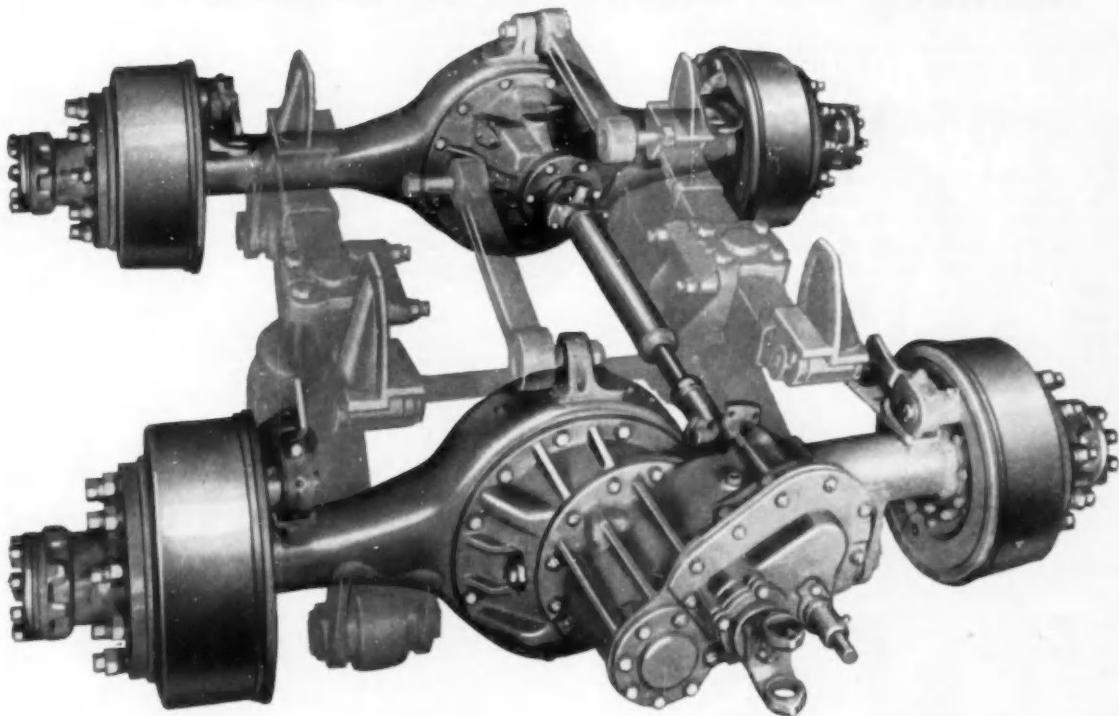
trailer by means of special clips with staggered gripping teeth which penetrate into the body of the "Styrofoam" and grip the material to such a degree that each clip, with additional epoxy resin plastic binder used, will resist a pull of 685 lb.

The inner surface is a sanitary fiberglass reinforced polyester plastic skin which is bonded to a rigid corrugated aluminum backing. The aluminum backing is in turn contour-bonded to the "Styrofoam" insulation. The corrugations are $\frac{1}{2}$ in. deep, permit and assist air circulation throughout the trailer.



EATON TANDEM DRIVE AXLES

**Give Trucks Greater Load Capacity—
Reduce Tire and Operating Costs**



Eaton Tandems are the most practical units available for increasing payload in proportion to gross weight. Eaton Axles—the load-carrying and driving components—are performance-proved by thousands of units and millions of miles of service. They are installed to operate in the position for which they were designed and, therefore, are not subject to abnormal stresses or to unnatural lubricating problems.

Exclusive Eaton features, simplicity of design, and rugged construction assure maximum performance with minimum maintenance.

Eaton Tandem Axle Features Provide Superior Performance

- Engineered specifically for tandem operation
- Rugged power divider transmits power equally to both axles
- Inter-axle differential compensates for variation in wheel speed and eliminates the need for tire matching
- Differential lock-out provides positive drive to each axle when needed
- Designed to give maximum strength with minimum weight

EATON

AXLE DIVISION
MANUFACTURING COMPANY
CLEVELAND, OHIO



PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater-Defroster Units • Snap Rings • Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

March News Roundup

Emergency Brake Regulation Meeting

AS A RESULT of a meeting held in Washington early last month, it seems likely that the Interstate Commerce Commission's Emergency Brake Regulations announced in mid-November will be modified. First will come an interim order, probably later this month, with a final order postponed until after a thorough testing of brake needs by the Bureau of Public Roads.

Representatives of the ICC, American Trucking Assns., Automobile Manufacturers Assn. and Truck-Trailer Manufacturers Assn. along with R. E. Swanson, Dept. of Railways and Transport technical engineer, British Columbia, Canada, hashed over the problem and agreed on the following points insofar as the interim agreement is concerned:

1. Each truck or tractor should be equipped with a protection valve in the air line and provision in the cab for the driver to make emergency application manually of the trailer brakes.

2. There should be a check valve on power units to safeguard the air supply in event of compressor line failure.

3. Trailer emergency relay valves should be so designed that the reserve air supply for trailer brakes would not be lost through a break in the tractor or connecting lines to the trailer.

4. Combinations should have a brake system which would apply brakes on the trailer automatically if air pressure from supply source should fall below a fixed point. (The actual pres-

Newark Truck Terminal

Port of New York Authority and seven over-the-road truck carriers (who will operate the Newark Union Motor Truck Terminal as Garden State Truck Terminal Corp.) have entered into a 4½-year lease covering the operation areas at the Terminal. The Terminal, the largest in the world, was opened March 1. The Terminal is located adjacent to U. S. Route 1, a short distance from the New Jersey Turnpike near Ruppert Stadium in the Ironbound District of Newark, N. J. The seven

carriers are: St. Johnsbury Trucking, Middle Atlantic Transportation, R. C. Motor Lines, Super Service Motor Freight, Mid-States Freight Lines, Hall's Motor Transit and York Motor Express. The Newark Terminal was completed by the Port Authority in July, 1950, and was occupied by the United States Air Force until June 30, 1955, for the processing of defense materials. The space leased comprises the great central platform for handling over-the-road merchandise freight moving in and out of northern New Jersey. The platform is about 1000 ft long x



1955 Domestic Truck Factory Sales by G.V.W.*

	5,000 lb. and less 10,000	5,001- 14,000	10,001- 16,000	14,001- 16,000	16,001- 18,500	19,501- 26,000	Over 26,000	Total
January	37,040	12,271	3,300	12,015	3,178	2,552	3,591	73,947
February	25,500	9,113	2,319	9,045	2,808	2,658	3,810	55,253
March	43,294	14,454	3,543	14,836	2,671	2,748	4,514	86,080
April	55,955	17,933	4,146	19,041	3,926	3,572	5,603	110,176
May	54,231	17,092	4,345	19,397	4,269	3,290	5,738	108,362
June	47,614	16,615	3,576	18,591	5,302	3,803	6,124	101,625
July	42,482	14,883	3,261	19,206	5,055	3,765	5,066	93,739
August	37,218	12,500	2,648	16,304	3,381	3,025	4,983	80,077
September	41,149	12,053	2,751	11,673	2,672	2,260	4,293	76,851
October	45,821	14,012	3,233	9,296	2,438	2,075	4,515	81,390
November	51,866	15,125	3,582	15,991	3,901	3,495	4,415	96,345
December	40,286	13,361	3,014	15,293	4,073	4,816	6,248	86,891
Total—12 Months, 1955	522,486	169,420	39,688	180,688	43,874	37,860	58,930	1,082,716
Total—12 Months, 1954	408,016	153,931	33,011	141,550	33,511	38,466	36,991	843,476

*Automobile Manufacturers Association.

sure was not decided on at the meeting, but it is understood to be in the neighborhood of 24 lb.)

It is reported that after the interim order is issued it would apply to new trucks within 60 days and to existing equipment within seven months. A committee of operators and manufacturers is being formed to assist the BPR with the brake testing. All interested parties have been invited to participate in the planning.

NCMCA Moves

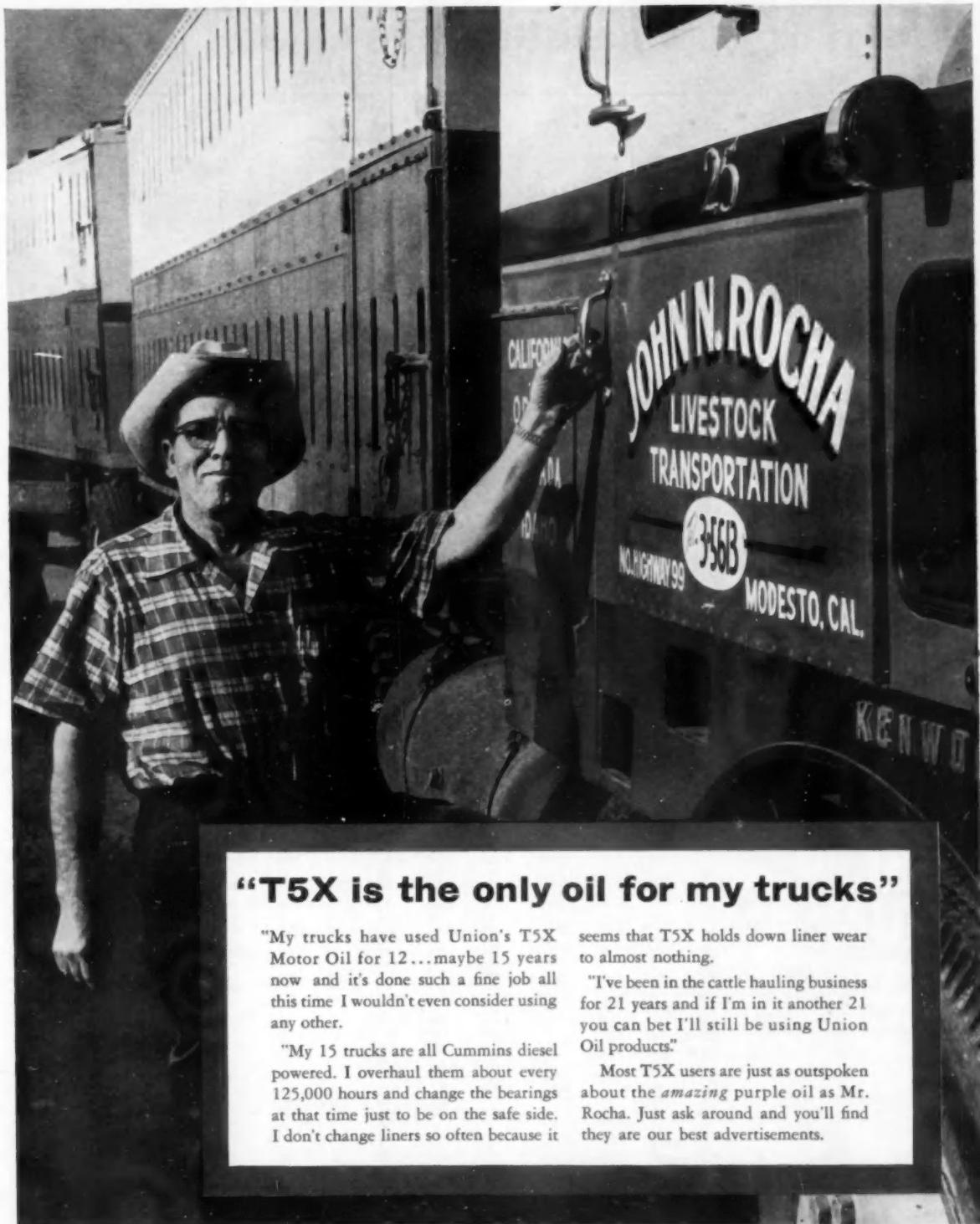
North Carolina Motor Carriers Assn. has moved into the new trucking industry building located at 219 West Martin St., Raleigh, N. C.

Alabama Safety Group

Horace Grant, Deaton Truck Line safety supervisor, is announced as first president of the newly organized

(TURN TO PAGE 184, PLEASE)

100 ft wide, with 160 truck berthing spaces. It includes 21,000 sq ft of office and gallery space as well as a 5-acre parking area. Terminal equipment includes a 10-ton crane and an under-floor 1830-ft long conveyor system with a capacity of 114 carts. Platform equipment also includes five 1½-ton scales and one 10-ton scale. A pneumatic tube system is available for internal transmission of shipping documents. A maintenance service and fuel station 100 ft long x 60 ft wide, capable of handling maintenance work on eight trucks simultaneously, is also located on the Terminal site. It was expected that when the Terminal opened on March 1 it would serve a total of 12 carriers, including five subtenants of the Garden State Truck Terminal Corp. They will serve 40 states either directly or by means of connecting carriers. It is expected that complete coverage of the entire country ultimately will be reached. Garden State, through a subsidiary, the Terminal Cartage Corp., will offer consolidated pick-up and delivery service in a substantial area of northern New Jersey. Initially, it will cover an area reaching 20 miles north, 20 miles south, and eight miles west of the city of Newark. It is expected that this area will rapidly be expanded.



"T5X is the only oil for my trucks"

"My trucks have used Union's T5X Motor Oil for 12... maybe 15 years now and it's done such a fine job all this time I wouldn't even consider using any other.

"My 15 trucks are all Cummins diesel powered. I overhaul them about every 125,000 hours and change the bearings at that time just to be on the safe side. I don't change liners so often because it

seems that T5X holds down liner wear to almost nothing.

"I've been in the cattle hauling business for 21 years and if I'm in it another 21 you can bet I'll still be using Union Oil products."

Most T5X users are just as outspoken about the *amazing purple oil* as Mr. Rocha. Just ask around and you'll find they are our best advertisements.

John N. Rocha, livestock transportation, Modesto, California

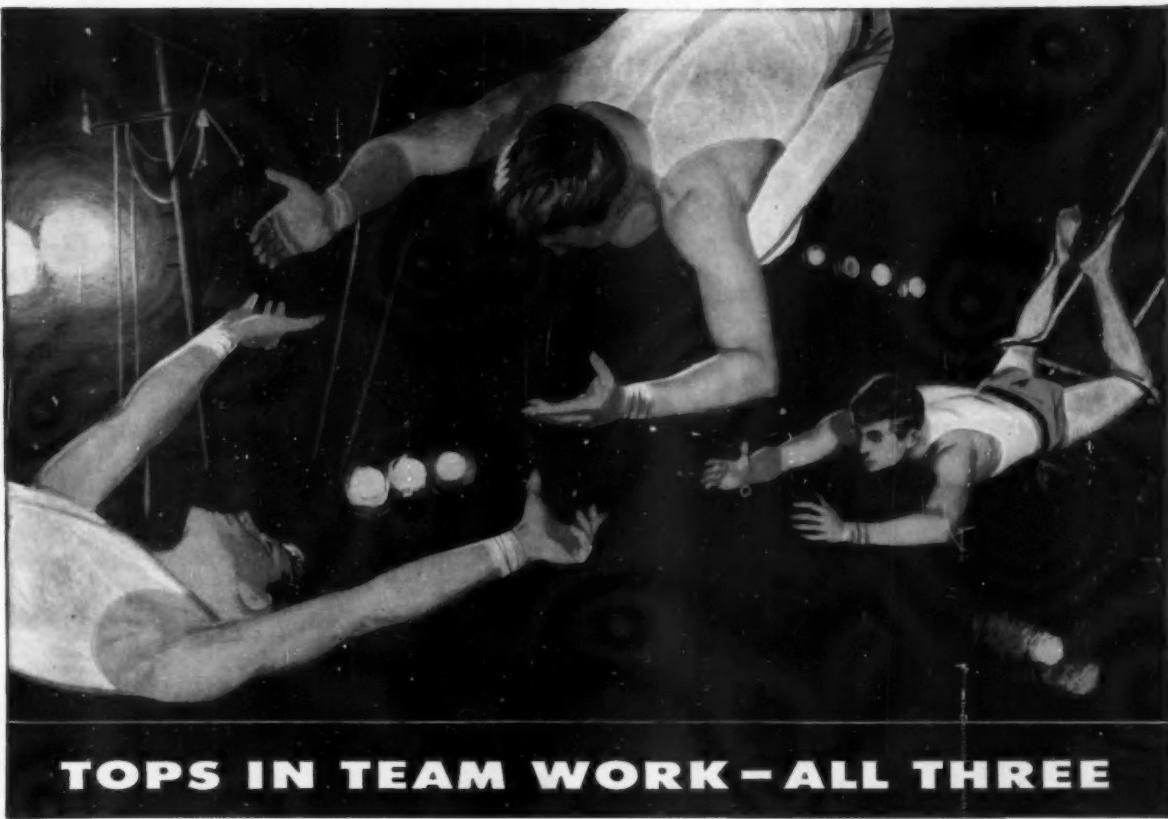


**UNION OIL COMPANY
OF CALIFORNIA**

Los Angeles: Union Oil Bldg. • **New York:** 45 Rockefeller Plaza • **Chicago:** 1612 Bankers Bldg. • **Dallas:** 313 Fidelity Union Life Bldg.
Philadelphia: Eastwick Ave. & Edgewood St. • **New Orleans:** 644 National Bank of Commerce Bldg. • **Kansas City, Mo.:** 612 W. 47th St.

1955 New Truck Registrations by Makes by States*

STATE AND MONTH	Brock- way	Chev- rolet	Diamond T	Dodge	Ford	G.M.C.	Internat- ional	Mack	Reo	Stude- baker	White	Willys Jeep	Willys Truck	All Others	Total
Alabama.....		1,445		188	1,144	526	247	39	8	22	22	31	26	1	3,701
12 Mos.	8,625	25	1,279	6,769	2,417	1,706	248	34	114	198	89	107	41	21,652	
Arizona.....	Dec. 513	4	384	216	78	4	1	17	10	27	42	38	1,431		
12 Mos.	3,271	11	734	2,422	1,044	636	41	17	150	47	147	294	103	8,916	
Arkansas.....	Dec. 457		215	268	44	2			7	2	5	6	1	1,043	
12 Mos.	6,258	30	903	5,677	1,947	1,390	50	8	208	77	67	174	111	7,764	
California.....	Dec. 2,755	11	553	2,814	741	347	29	32	61	59	77	174	111	21,669	
12 Mos.	4 30,200	312	7,189	28,123	8,908	5,779	385	282	1,111	912	1,314	2,065	1,791	88,376	
Colorado.....	Dec. 359	4	37	233	98	59	7	1	11	11	40	10	89	889	
12 Mos.	4,206	29	861	3,478	1,222	1,168	99	44	168	122	483	695	174	12,756	
Connecticut.....	Dec. 241	10	58	298	94	86	39	7	14	56	12	40	27	984	
12 Mos.	2,689	102	652	2,377	755	1,123	311	60	100	343	140	234	153	9,071	
Delaware.....	Dec. 91	3	12	150	45	64	6			19	2	2	2	396	
12 Mos.	6 956	6	224	828	354	400	265	4	14	248	24	21	16	3,449	
District of Columbia.....	Dec. 81	2	61	84	27	14	1	1		7	5	3	1	257	
12 Mos.	2 863	13	253	735	337	238	13	30	4	39	22	24	35	2,606	
Florida.....	Dec. 1,134	15	139	900	267	210	67	13	22	38	85	93	62	3,045	
12 Mos.	1 9,639	78	1,821	8,960	2,523	2,183	553	131	358	508	489	719	307	28,160	
Georgia.....	Dec. 864		63	550	208	75	4	1	5	9	2	8	8	1,808	
12 Mos.	10,047	31	1,761	9,355	2,343	2,173	289	42	278	336	107	63	24	26,879	
Idaho.....	Dec. 165		37	123	81	73	3		8	5	12	40	6	553	
12 Mos.	2,060	12	828	1,886	826	840	46	4	157	42	183	428	37	6,849	
Illinois.....	Dec. 1,361	80	248	1,250	400	492	11	3	40	57	45	46	23	4,056	
12 Mos.	12,999	478	2,978	12,114	2,921	5,877	237	131	443	547	367	370	324	39,766	
Indiana.....	Dec. 730	7	69	505	129	238	8	1	39	37	12	11	8	1,824	
12 Mos.	10,059	133	1,841	8,430	2,113	4,060	167	115	672	668	143	206	369	28,976	
Iowa.....	Dec. 479	13	73	439	109	205	5	9	16	8	8	8	1,373		
12 Mos.	5,474	127	1,076	5,485	1,000	2,964	57	23	147	144	70	99	102	16,770	
Kansas.....	Dec. 470	2	42	348	105	92	1		8	6	9	10	1	1,084	
12 Mos.	6,416	33	715	5,530	1,409	1,879	4	45	182	106	84	106	47	16,814	
Kentucky.....	Dec. 819	9	79	644	245	109	11	9	17	14	29	29		2,014	
12 Mos.	6,148	34	929	5,134	1,736	1,454	104	33	160	152	190	195	28	16,297	
Louisiana.....	Dec. 788	5	54	819	136	99	1		11	8	19	14	1	1,935	
12 Mos.	8,300	45	1,204	7,885	1,772	1,800	82	10	233	170	158	103	19	21,781	
Maine.....	Dec. 179		15	164	63	70	1		10	5	19	24	2	562	
12 Mos.	3 1,990	15	389	1,676	655	705	158	3	111	71	157	244	89	6,198	
Maryland.....	Dec. 424		72	266	88	66	19	4	9	30	8	7	10	1,103	
12 Mos.	29 3,769	43	1,025	3,867	682	1,289	205	64	111	251	74	121	80	11,267	
Massachusetts.....	Dec. 4 239	2	42	330	102	81	8	7	3	12	25	42	15	893	
12 Mos.	44 3,831	100	962	4,619	1,020	1,583	311	115	105	362	162	382	263	13,879	
Michigan.....	Dec. 1,496	24	314	1,511	478	282	10	33	35	46	48	84	52	4,397	
12 Mos.	1 14,297	202	3,359	14,624	3,734	2,460	233	246	319	347	382	494	356	41,034	
Minnesota.....	Dec. 771	4	96	740	154	194	4	3	30	5	23	37	11	2,072	
12 Mos.	5,771	82	1,074	5,843	1,396	2,368	103	42	247	102	119	255	122	17,528	
Mississippi.....	Dec. 1,102		77	577	241	206	1	1	19	2	26	11	1	2,283	
12 Mos.	7,990	2	900	6,242	1,963	1,816	63	2	198	36	82	88	8	19,385	
Missouri.....	Dec. 776		64	518	216	142	3	2	11	24	25	10	3	1,796	
12 Mos.	10,045	130	1,385	7,982	2,389	2,762	90	59	191	285	136	137	83	25,874	
Montana.....	Dec. 226		43	152	67	89	2	3	5	3	28	79	8	696	
12 Mos.	2,576	3	539	2,208	892	1,026	63	23	176	71	233	801	67	8,479	
Nebraska.....	Dec. 379	8	112	244	86	109	3	1	6	23	9	20	6	1,006	
12 Mos.	3,622	142	277	3,584	955	1,845	43	24	114	143	103	203	202	11,707	
Nevada.....	Dec. 151		27	107	45	23	1		18	3	14	1	3	389	
12 Mos.	733	1	235	687	316	275	6	2	128	3	79	160	8	2,634	
New Hampshire.....	Dec. 103		19	113	44	19	37	2	4	12	16	38	9	417	
12 Mos.	8 969	8	247	883	281	291	134	23	51	43	108	196	40	3,282	
New Jersey.....	Dec. 684	19	192	656	255	158	48	3	18	58	21	42	50	2,206	
12 Mos.	195 6,754	160	2,054	6,738	2,309	2,188	596	58	181	696	156	322	417	22,826	
New Mexico.....	Dec. 545		41	335	172	100	15		9	11	25	35	7	1,295	
12 Mos.	3,400	17	536	2,325	949	668	114	6	102	47	165	232	36	6,597	
New York.....	Dec. 70 1,217	34	499	1,363	541	603	158	54	36	120	91	120	99	5,005	
North Carolina.....	Dec. 12 Mos.	13,556	312	5,180	13,019	4,320	7,153	1,466	557	419	1,391	747	1,196	857	50,720
Dec. 984		102	600	240	122	90	2	2	31	33	10	10	1	2,225	
North Dakota.....	Dec. 97		15	69	28	52	1		1		5	18		285	
12 Mos.	1,521	2	345	1,432	472	1,040	1		58	6	42	96	6	6,021	
Ohio.....	Dec. 1,178	25	233	1,250	335	352	48	21	29	80	91	74	69	3,785	
12 Mos.	6 13,411	213	3,082	13,261	3,219	5,478	553	184	391	966	488	530	533	42,315	
Oklahoma.....	Dec. 1,117	3	83	764	274	246	30	8	18	16	18	14	3	2,584	
12 Mos.	7,898	22	980	6,566	1,795	2,208	81	30	197	150	98	115	55	20,205	
Oregon.....	Dec. 410	1	45	419	209	101	10	10	14	19	25	55	24	1,342	
12 Mos.	4,674	83	1,000	4,232	1,733	1,600	178	59	299	393	321	977	310	18,859	
Pennsylvania.....	Dec. 31 1,406	23	234	1,254	599	511	194	19	47	154	11	122	39	4,764	
12 Mos.	254 13,436	210	3,955	12,860	3,662	6,418	1,253	232	535	1,104	92	1,103	338	46,452	
Rhode Island.....	Dec. 293	2	13	120	18	24	1		1	8	1	4		484	
12 Mos.	4 1,108	45	200	909	175	399	96	21	30	73	19	43	33	3,155	
South Carolina.....	Dec. 595	66	432	133	88	11	1		13	18	9	3	1	1,369	
12 Mos.	4,237	7	715	3,256	631	696	93	1	86	107	40	34	10	16,113	
South Dakota.....	Dec. 125	1	18	138	34	22	1		1		11	14	2	367	
12 Mos.	1,410 24	318	1,576	431	1,001	5	4	60	17	116	162	7	5,131		
Tennessee.....	Dec. 624	2	62	472	186	109	15		15	10	4	6	1	1,506	
12 Mos.	8,734	32	1,179	6,069	1,803	1,863	271	38	174	319	108	105	23	18,736	
Texas.....	Dec. 4,472	18	342	2,721	707	621	63	6	163	118	65	16	9,374		
12 Mos.	33,664	142	3,797	26,354	5,573	7,159	494	53	730	1,249	639	527	175	80,756	
Utah.....	Dec. 182	2	178	159	146	93	16	2	15	12	9	38	18	870	
12 Mos.	1,612	13	581	1,439	649	561	45	16	74	87	129	284	71	5,541	
Vermont.....	Dec. 47	1	10	83	33	29	2		3	1	19	27	6	261	
12 Mos.	6 820	9	207	739	317	403	14	10	33	6	187	259	20	3,030	
Virginia.....	Dec. 885	3	112	573	209	133	16	11	12	17	8	27	7	1,995	
12 Mos.	9 7,227	24	1,438	6,462	1,660	1,724	426	102	257	340	235	331	96	20,272	
Washington.....	Dec. 333	2	104	405	170	71	3	2	10	16	21	35	14	1,206	
12 Mos.	4,398	58	1,371	3,367	2,646	1,611	146	51	203	254	302	592	217	15,770	
West Virginia.....	Dec. 283	1	96	204	95	61	27	1	7	29	21	17	808		
12 Mos.	3 1,042	17	886	2,659	969	540	129	17	155	135	311	355	34	9,336	
Wisconsin.....	Dec. 856	4	87	502	139	255	15	6	9	14	31	29	34	1,676	
12 Mos.	5,235	3													



TOPS IN TEAM WORK—ALL THREE

each does a special job

J&L's JALTEN series offers you three top performing high strength, low alloy steels with the following characteristics:

JALTEN NO. 1—High strength, good formability and fabricating—good resistance to low temperature impact.

JALTEN NO. 2—High strength, moderate forming—improved resistance to atmospheric corrosion.

JALTEN NO. 3—High strength—improved abrasion resistance.

**J&L
STEEL**

SEND FOR THIS NEW BOOK:
Chemical properties of Jalten
Mechanical properties of Jalten
Jalten equivalents
Jalten application data



Jones & Laughlin Steel Corporation
Dept. 432—3 Gateway Center
Pittsburgh 30, Pennsylvania

Please send a copy of your Jalten booklet, **JALTEN LOW-ALLOY, HIGH-STRENGTH STEEL**.

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Jones & Laughlin
STEEL CORPORATION — Pittsburgh

Air Conditioning Moves into Fleet Field

Continued from Page 81

models can usually be adapted to truck cab use.

With this equipment, the driver sets the control for the temperature desired, and the unit automatically maintains that temperature—limited, of course, by the capacity of

the system. For purposes of selecting the type best suited to your fleet operation, let's first have a detailed look at the three-part air conditioning system as opposed to the air coolers described further on.

COLD-WEATHER Tune-Ups Save Money!

**Start Now—with NIEHOFF
says Danny Dollar...**

• Save money by guarding now against roadside repairs, towing charges, and vehicles out of service this winter. Niehoff Warranted Ignition Parts provide one of the surest ways of keeping your fleet operating efficiently, economically—and profitably!

Quick, easy installation saves time costs, speeds job completions. Niehoff Warranted Ignition Parts are precision-made to fit all popular makes and models of cars and trucks. What's more, each part is warranted for 90 days or 4,000 miles of use as a pledge of Niehoff dependability.

So order Niehoff Warranted Ignition Parts now...keep your fleet going this winter!



C. E. NIEHOFF & CO.

4925 LAWRENCE AVENUE, CHICAGO 30, ILLINOIS

WAREHOUSES: NEW YORK 19, N.Y., 250 W. 54th Street. PHILADELPHIA, PA., 1631 Fairmont Ave.
BOSTON 34, MASS., 254 Brighton Ave. BRANCHES: LOS ANGELES 15, CALIF., 1330 W. Olympic Blvd.

Cost and Transferability

Fleet price (quantity purchase not including excise taxes or installation cost) of the average vehicle air conditioning unit ranges from \$250 to \$360 per unit. Kysor Heating Co.'s completely self-contained and self-powered unit for trucks is priced around \$525.

Installation of a typical unit takes about a day and a half, sometimes less, costs from \$25 up to as high as \$70. This can be cut somewhat when the fleet shop does the installing. Units usually can be transferred from vehicle to vehicle. Changeover kits are offered by most manufacturers. They are essentially new condenser mounting brackets designed for a particular make and model of vehicle.

Component Location

Frigikar Corp. makes three models that illustrate the possible location of the air conditioning system's components. For all passenger car installations, the condenser is mounted forward of the vehicle radiator with the compressor at a convenient location for a fan belt drive. The evaporator or cooling coil in the "Frigikar" model is located in the trunk, as is the case with one model made by National Gas Equipment Co. and those made by Novi Equipment Co.

Frigikar's "Frigiking" model has the evaporator mounted under the dash, as does one model made by National Gas Equipment and those made by Era Tool and Engineering Co. and Frigiquip Corp. The factory-installed unit for Chevrolet—produced by GM's Harrison Radiator division—is typical of another type that has its evaporator on the engine side of the firewall with the cold air outlet opening in the firewall.

Two alternative condenser mountings are suggested by Frigikar for its "Frigikab" model for truck cabs. At extra cost, the condenser can be located on the cab roof or on the side of the cab under the door. However, mounting ahead of the radiator is standard for all makes where space permits.

Kysor's truck cab unit is an exception to these component locations
(TURN TO PAGE 116, PLEASE)

Handle TODAY'S REPAIRS Right!

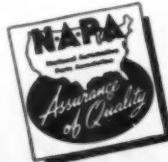
Choose
"Professional" Tools
by
New Britain



Greater strength, better fit, completeness of Line... New Britain Hand Tools offer you these BIG advantages. They handle today's repairs better, easier, and faster—add up to big savings in mechanics' time and trouble.

Whatever the job, there's a New Britain Tool designed to do it *right*—a complete Line of rugged Tools, designed by mechanics for mechanics, available individually or in sets to meet every shop requirement. All are carefully engineered, made from top quality materials, and fully guaranteed. You can count on New Britain Tools to give a lifetime of useful service.

See these great New Britain Tools today! Write for Catalog No. 58 and complete details.



GREATER STRENGTH • BETTER FIT
THE NEW BRITAIN MACHINE CO. • NEW BRITAIN, CONN.

New Britain HAND TOOLS

NEW!
TOOLS FOR
HYDRA-MATIC
TRANSMISSIONS



ACT-1
FRONT & REAR
CLUTCH TESTER



AGS-1
GOVERNOR SLEEVE
ALIGNING TOOL

PLUS... A Variety of Tools for Servicing Other Automatic Transmissions

DYNAFLOW • POWERGLIDE
FORDOMATIC • MERCOMATIC
HYDRA-MATIC

Ask for Complete Information

Again in '55...

MACK



**...IN
DIESEL
TRUCK
SALES**

*and by the
biggest margin ever!*

42.06% * **of all diesel trucks** **sold in 1955** **were MACKS!**

Operators everywhere, in all kinds of hauling operations, have again made Mack their No. 1 favorite among *all* diesel trucks. And their margin of preference is the biggest so far! Regardless of competitive claims, Mack owners have learned from millions of miles of heavy-duty operation how truly outstanding are Mack trucks powered by

the famous Mack Thermodyne Diesel engine. They're *first* in earning power . . . because they're *first* in fuel economy, *first* in low-cost maintenance, and *first* in rugged long life. See your Mack branch or distributor for the full story. Mack Trucks, Empire State Building, New York 1, New York.

FAMOUS MACK THERMODYNE® DIESEL engine that has brought new meaning to the word economy in hauling. Now available with more power than ever—turbocharged to 205 h.p.

* based on official A.M.A. factory sales figures. Nearest make attained 17.16% of the market.



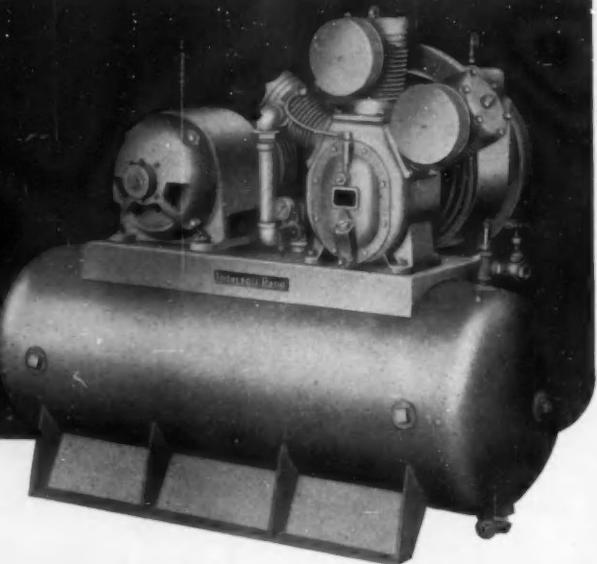
3961

MACK... first name for TRUCKS

when the pressure is on SERVICE

boost your profits with an

I-R AIR COMPRESSOR



When you need service air you want an ample, dependable supply which gives you air as fast as you need it and at the lowest possible cost!

That's why more and more garage operators and service managers are asking for Ingersoll-Rand Type 30 Compressors. They know they'll get air that helps them do jobs more speedily and at lower cost. They put these savings into profits!

Ask your nearest I-R Air Compressor jobber for the cost-saving story... how I-R's *Balanced V Construction* produces more air-per-horsepower.

*If your jobber is out of I-R
Compressor bulletins, write*

Ingersoll-Rand

3-349 11 Broadway, New York 4, N. Y.

Air Conditioning

Continued from Page 112

tions. In this unit, condenser, compressor and evaporator—together with a 2-cycle, 4-hp gasoline engine—are packaged together for mounting on the truck cab roof. Fuel tank and vehicle battery-powered fuel pump for this unit are mounted on rear of cab.

Installation

It might be expected from the preceding discussion that installation of these units requires extensive air conditioning training. While it probably helps, this is not the case.

In most models, all components and "plumbing" except the refrigerant (usually Freon 12) are included in the purchase price and are shipped together. Units are usually accompanied by instructions that should be clear to a competent automotive mechanic. One problem, however, that often requires outside expert help is the refrigerant. Few fleet shops are equipped to (1) check the installed system for leaks and (2) fill the system with Freon under pressure. Even almost-impossible-to-locate pin hole leaks cause a loss in refrigerant with resulting steady decline in refrigerating efficiency.

Exception to this is Kysor's unit. Since it has its components factory-packaged together, it comes with Freon already in the system.

Maintenance

Once installed, preventive maintenance on air conditioning becomes largely a matter of (1) adequate lubrication, (2) checking the system for leaks—remember it's a pressurized system, and (3) keeping the correct level of refrigerant in the system and dirt and water out. Compressor overhaul is periodically necessary. Trouble in other parts of the system—fan motor, valves, refrigerant lines, etc.—is usually corrected by replacement of the faulty component.

Use of a magnetic clutch between the compressor and fan belt drive helps solve the problem of varying (TURN TO PAGE 121, PLEASE)

The Handsome Van for Your New Chassis

NO OTHER BODY OUTLASTS A BROWN



**Brown ALUMINUM
CARGO VAN BODIES**



prompt DELIVERY

ECONOMIZE
MODERNIZE
STANDARDIZE



LIGHTER . . . STRONGER
LOWER COSTS . . . NO RUST
RIGHT PRICE . . . CHOICE

(Listing Continued From Other Side)

NORTH CAROLINA

Charlotte: COOK BODY COMPANY
High Point: MICKEY EQUIPMENT CORPORATION
Wilson: GRAMM-SOUTHERN CORP.
HACKNEY BROS. BODY COMPANY

NORTH DAKOTA

Fargo: SMITH, INC.

OHIO

Akron 11: TRIANGLE EQUIPMENT COMPANY
Cincinnati 24: MELVIN ASTON WELDING COMPANY
Cleveland 8: KLEIN AUTO BODY CO.
Columbus: BUCKEYE TRUCK BODY BUILDERS, INC.
Kildonan: KILDONAN BODY COMPANY
Toledo 6: MIDDLEKAUFF, INC.

OKLAHOMA

Tulsa 1: TRAVELODGE CORPORATION

OREGON

Portland 9: DOUGLAS HOOD COMPANY

PENNSYLVANIA

Allentown: BRUMBAUGH BODY COMPANY
Forty Fort: MOORE BODY COMPANY
Harrisburg: MOORE BODY COMPANY
Lock Haven: MOORE BODY COMPANY
Oil City: SHREFFLER TRUCK EQUIPMENT CO.
Philadelphia: ORIANNA WAGON WORKS
Pittsburgh: A & S TRUCK TRAILER COMPANY
MAYER BODY CORPORATION
SABELL COMPANY
Reading: MOORE BODY COMPANY
Uniontown: A. L. STEPP EQUIPMENT

SOUTH DAKOTA

Sioux Falls: ROY DRAKE BODY SHOP
Watertown: SCHWEIGERS, INC.

TENNESSEE

Chattanooga 2: A. FASSNACHT & SONS, INC.
Kingsport: HAMLETT EQUIPMENT CO.
MOTOR SALES CO. OF KINGSPORT, INC.
Knoxville 8: POST & COMPANY, INC.
Nashville: KIRBY & ROSS

TEXAS

Dallas: ASHTON-RICHARDS CO. OF TEXAS
Fort Worth: G & G MECHANICAL COMPANY
Houston 8: BIG CHIEF TRAILER COMPANY
Lubbock: WESTERN TRAILER COMPANY
San Antonio: COMMERCIAL BODY CORPORATION

UTAH

Salt Lake City: COMMERCIAL EQUIPMENT CO.

VIRGINIA

Richmond 21: BROWN-CLARK EQUIPMENT CO., INC.
Roanoke: BROWN-CLARK EQUIP. CO.
OF ROANOKE INC.

WASHINGTON

Seattle 4: J. E. OCHILTREE
Spokane 6: LELAND TRAILER COMPANY
Tacoma: HOLTE TRUCKING EQUIPMENT

WISCONSIN

Green Bay: OLSON TRAILER & BODY BLDRS.
Milwaukee: H. BARKOW COMPANY
BRAKE & EQUIPMENT COMPANY

CANADA

Calgary (Alberta): ALBERTA WHITE TRUCKS, LTD.
Edmonton (Alberta): EDMONTON WHITE TRUCK
SALES LTD.
Vancouver, B.C.: WHITE MOTOR CO. OF
CANADA, LTD.

OVERSEAS

Hempstead, N.Y.: DENSLY F. HAMLIN (Export)

SINCE 1929

Continuous Research,
Engineering Skill and
Testing On — the — Job
Have Resulted in the
SUPERIOR STRENGTH yet
LIGHTER WEIGHT of the
Brown Cargo Van Body
And its Acceptance by
Leading Companies!

ROOF STRUCTURE
RIVETED . . . No Leak

**STANDARDIZED
PANELS**
Corrugated
or Smooth



SUPERIOR RUB-RAIL
Exclusive Brown Construction
Method Eliminates Corrosion

**ONLY BROWN OFFERS NATIONWIDE
BODY SALES and SERVICE. PROFIT
CAN'T MAKE A BETTER CHOICE THAN**

Custom-designed, mas-
terized parts provide
basic Brown ALUMINUM
range of special uses.

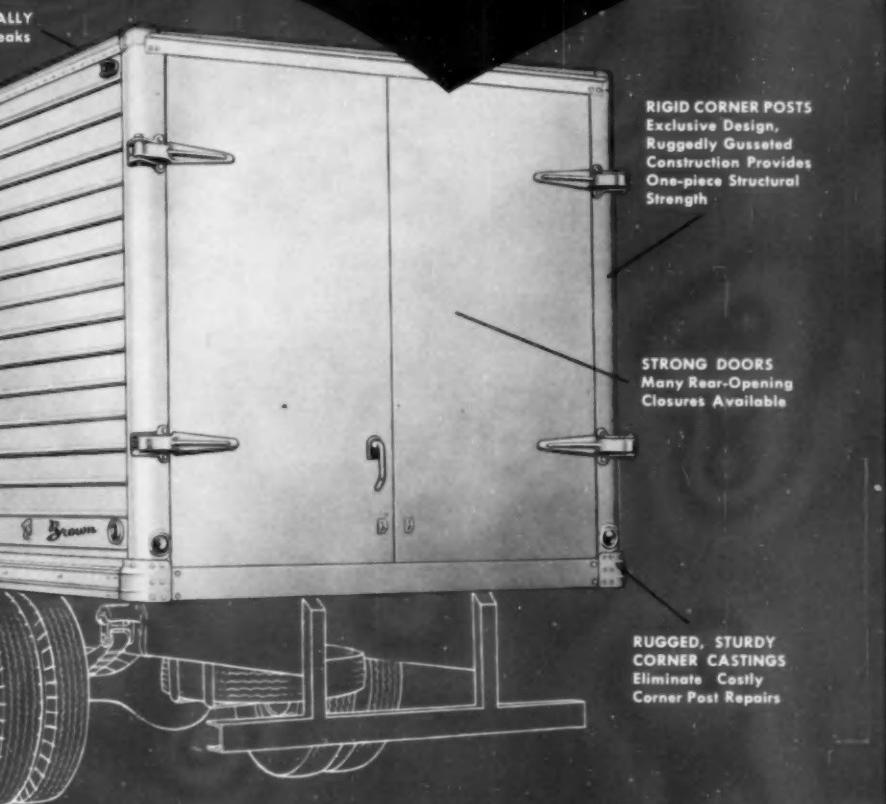
Brown Aluminum Body
equipped to give you f

CALL IN YOUR NEAREST
BROWN CARGO VAN
BODY DEALER . . . NOW!

BROWN TRAILER

KE...
IZE...
RDIZE with

GER ... MORE PAYLOAD
RUST ... NO PAINT ...
OICE OF FEATURES ...



DE ALUMINUM
FIT-WISE, YOU
AN A BROWN!

mass produced stand-
ide for adapting the
NUM Body to a wide
es.

body Dealers are fully
u factory quality and

Mass-production-pricing right in your
town, on one or more units.

For complete details see your nearby
Brown Cargo Van dealer listed on this
page, or write to Brown Trailers, Inc.,
P.O. Box 54, Spokane, Washington for
illustrated folder CV-156.

AILERS, INC. • READING • SPOKANE • TOLEDO



prompt DELIVERY

ALABAMA
Birmingham 1: ALUMINUM TRAILER SALES, INC.

ARIZONA
Phoenix: SUPERIOR COACH SALES & SERVICE

ARKANSAS
North Little Rock: CAPITOL TRAILER CO.

CALIFORNIA
Fresno: C & C TRAILER & BODY COMPANY
Los Angeles 21: C & C TRAILER & BODY COMPANY
Oakland 21: C & C TRAILER & BODY COMPANY
Sacramento: JORDAN & POLLOCK

COLORADO
Denver 5: BROWN TRAILER COMPANY

CONNECTICUT
New Haven: CONNECTICUT WHEEL & RIM CO.

GEORGIA
Albany: MOTT BODY WORKS
College Park: CARLEY TRAILER & EQUIPMENT CO.

ILLINOIS
Chicago 18: VOLTZ BROTHERS INC.
Moline: MOLINE BODY COMPANY
Rockford: NELSON TRAILER & BODY COMPANY

INDIANA
Elkhart: EMMERT TRAILER CORP.
Evansville 7: HERCULES MANUFACTURING CO.
Indianapolis 27: S. E. PROPS COMPANY, INC.

IOWA
Des Moines 14: HAWKEYE TRUCK EQUIPMENT CO.

LOUISIANA
Shreveport: KING'S TRUCK BODY WORKS

MASSACHUSETTS
Somerville 43: WALSH BODY & TRAILER CORP.

MICHIGAN
Detroit 9: OLEYNIK BODY COMPANY
Flushing: AMERICAN BODY COMPANY
Grand Rapids: OVENS BODY COMPANY
Kalamazoo: DALEIDEN AUTO BODY CORP.
Rockford: BURCH BODY WORKS
Jackson: LUTTER BROTHERS

MINNESOTA
St Paul 14: POWER BRAKE & EQUIPMENT CO.

MISSOURI
Kansas City: ASHTON-RICHARDS COMPANY, INC.
HESSE CARRIAGE COMPANY
St. Louis 18: SOUTHWEST TRUCK BODY CO.

MONTANA
Billings: MONTANA TRAILER SALES & EQUIP. CO.

NEBRASKA
Omaha: WESTERN TRAILER & EQUIPMENT CO.

NEW JERSEY
Jersey City 6: ADAM BLACK & SONS, INC.

NEW MEXICO
Albuquerque: INLAND WHITE TRUCK COMPANY

NEW YORK
Albany 4: J. BECKER & SONS, INC.
Binghamton: BINGHAMTON TRUCK SERVICE CORP.
Brooklyn 38: FRANKLIN BODY & EQUIPMENT CORP.
Long Island City 1: HUBER WAGON WORKS
New Hyde Park: VAN BUREN TRUCK BODY BLDRS.
Utica 2: NORTH MOTOR EQUIPMENT & MACH. CO.

Continued . . . OVER

**ONLY BROWN OFFERS YOU
THIS NATIONWIDE
SALES and SERVICE
OF FULLY EQUIPPED
ALUMINUM BODY BUILDERS**

Air Conditioning

Continued from Page 116

engine speed and need for constant compressor operation. Some makers offer this feature as standard, with others it is optional at extra cost. Kysor's unit, having its own power source, does not need this type of clutch.

By-pass valve sticking has to be watched for. Air conditioning systems tend to ice up on the evaporator coils during long trips. The ice obstructs heat absorption by the refrigerant, puts a strain on the system. To overcome this, makers usually include in the system a thermostatically controlled valve that by-passes the compressor. When the system operates too cold, the valve opens to permit warm refrigerant to by-pass the compressor and melt the ice off the evaporator coils.

Air Coolers

As might be expected, the evaporator-type air coolers cost less than the complete air conditioning units. Even the highest priced run under \$100, usually are considerably less. Quantity discount brings the price still lower. Installation time averages about a half hour. Installation cost varies from about \$20 to nothing for the type that clamps on the vehicle door with two thumb screws. All are transferable from vehicle to vehicle.

Their basic principle of operation is that water will absorb heat from the air. Simplest in operation is the type made by Bonzer-Western Corp. that clamps on the vehicle door. It has a water reservoir which feeds water to absorbent

padding. Motion of the vehicle forces air through this padding causing a heat-absorbing evaporation of the water. The cooler air is then discharged into the passenger car or truck cab. Bonzer-Western also has a similar unit with a fan that operates by plugging it into the vehicle cigarette lighter.

Larger Units

Under-dash air coolers are offered by Spitzka Mfg. Co. and

G & S Mfg. Co. Air circulation through the evaporator pad is obtained with an engine-powered fan. A fan belt power take-off, utilizing a slip clutch for constant fan speed, and flexible drive cable are used. The cable drive usually also powers a water pump that recirculates the water from a drip pan at the bottom of the pad back into the water reservoir.

G & S also offers its cable-drive
(TURN TO NEXT PAGE, PLEASE)



use only
FACTORY NEW
GENUINE
BENDIX DRIVES
and
PARTS!



Repeat business is the foundation on which service profits are built. One of the surest ways to keep customers coming back time and time again is to use only genuine parts in your repair work. When you service Bendix® Drives, be sure to use only *factory new* Bendix Drives and Parts. Your customers will get the same dependable performance built into every original Bendix Drive—performance proven by over 100,000,000 installations. Insist on *factory new* Bendix Drives and Parts when you order from your distributor.

*REG. U.S. PAT. OFF.

Bendix Drive

ECLIPSE MACHINE DIVISION of
ELMIRA, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, New York

Bendix

AVIATION CORPORATION



Air Conditioning

Continued from Page 121

model with a 110-volt, AC electric motor. It can be detached from the cable drive and plugged into any convenient 110-volt outlet. Removal from the vehicle takes only a few minutes. G & S also has available a completely portable unit on legs that plugs into the cigarette lighter to power the blower

fan. This unit converts to 110-volt, AC current use with an optional transformer.

Metal Products Engineering, Inc., has an air cooler for mounting on the back of regular or sleeper cabs. Its fan and water recirculating pump (a Bendix fuel pump) are powered by the vehicle's battery.

Maintenance on these air coolers is largely a matter of filling them with water as needed. Foreign

matter should be kept out of the water pumps supplied with the Spitzka and Metal Products Engineering models. This last unit is also equipped with filtering screens in the water reservoir and the Bendix pump that should be cleaned regularly.

Sources

In addition to factory-installed models for most passenger cars, air conditioning units are available from:

Era Tool and Engineering Co., 9240 Belmont Ave., Franklin Park, Ill.—passenger car and truck.

Frigikar Corp., 1602 Cochran, Dallas, Texas—passenger car and truck.

Frigiquip Corp., 3724 North May Ave., P. O. Box 7205, Oklahoma City, Okla.—passenger car and truck.

Kyser Heater Co., Cadillac, Mich.—truck only.

National Gas Equipment Co., P. O. Box 122, Denison, Texas—passenger car and truck.

Novi Equipment Co., Novi, Mich.—passenger car only.

Air coolers are made by:

Bonzer-Western Corp., 3055 East 12th St., Los Angeles 23, Cal.

G & S Mfg. Co., 2824 East Washington St., Phoenix, Ariz.

Metal Products Engineering, Inc., 4000 Long Beach Ave., Los Angeles 58, Cal.—truck only.

Spitzka Mfg. Co., 235 Cedar St., North Sacramento, Cal.—passenger car and truck.

END

Please Resume Reading Page 82

Please, No OS&DI!



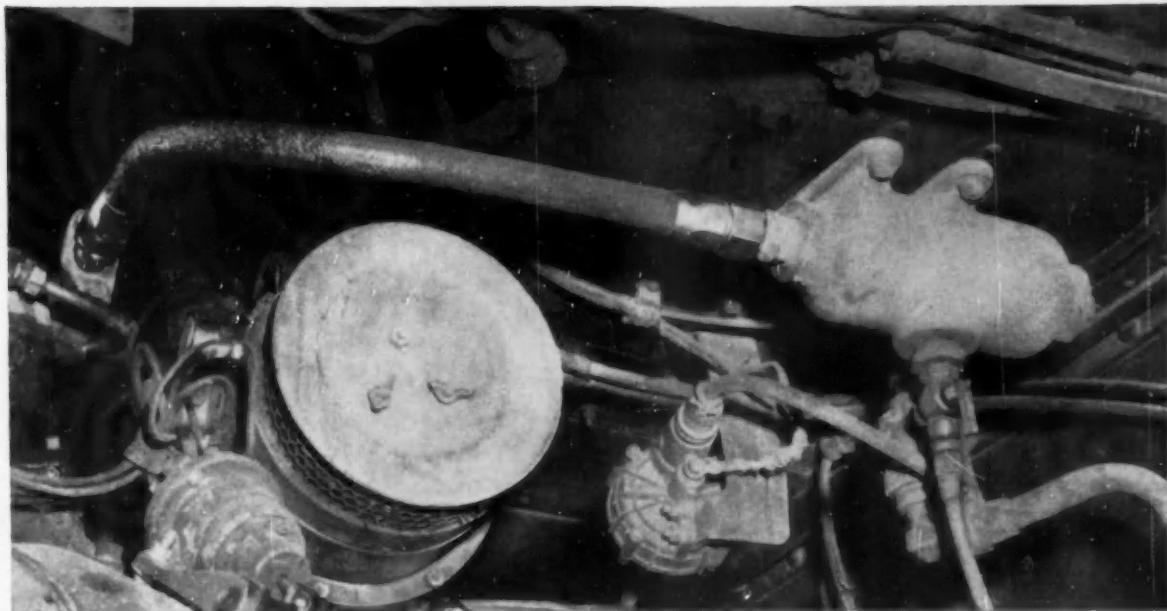
Brink's, Inc., has placed this new diesel-powered, six-wheel, armored International Model No. RDF-192 truck in Federal Reserve Bank service, hauling coins and currency between district and member banks. The truck is shown as it starts a journey eastward from the Chicago Federal Reserve Bank. Powered by a Cummins JT-6-B turbocharger diesel engine, it has a five-speed main transmission with three-speed auxiliary. All-over armor and bullet-resisting glass protect crew and cargo. Crew is equipped with a variety of defensive weapons. In its over-all operation, Brink's handles about one billion dollars in cash daily, adds that no Brink's armored car has been successfully attacked in 30 years.

**ANOTHER
BONNEY
TOOLS
FIRST!**

Every time you pick up this new BONNEY PE Wrench, you'll like the feel of it. Resilient plastic finger grip fits your hand. Lets you work longer, more comfortably, without tiring. Keeps your fingers from freezing when you're working in the cold. It's electrically insulated, too. Get it from your jobber . . . or drop us a line. Do it today!

BONNEY FORGE & TOOL WORKS • ALLENTOWN, PA.

New Aeroquip Air Compressor Discharge Hose Has No Known Limit to Service Life!



Aeroquip's new 2800 Air Compressor Discharge Hose for bus and truck air brake systems was installed on a Schuylkill Valley bus in October, 1953, on a test basis. Frederick J. Whalen, general superintendent, Schuylkill Valley Line, Inc., Norristown, Pa., reports that the hose still operates satisfactorily after 131,000 miles.

Field tests on several hundred test lines conducted over a period of three years have indicated that there is no known limit to the service life of Aeroquip 2800 Air Compressor Discharge Hose.

Specially designed to meet the operating conditions of an air compressor discharge line, Aeroquip 2800 hose has a silicone inner tube that offers two important advantages: (1) it will not become brittle and crack, even at temperatures up to 500° F., (2) it minimizes carbon pickup, a major cause of failure.

Install Aeroquip's new 2800 hose and reusable fittings and end your major cause of air brake trouble! See your Yellow Page Directory for your Aeroquip distributor, or write us.

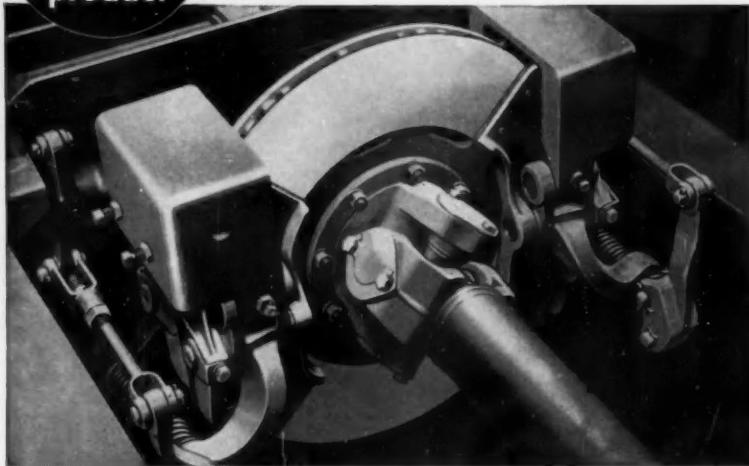

REG. TRADEMARK

AEROQUIP CORPORATION, JACKSON, MICHIGAN

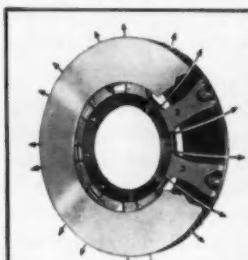
IN CANADA: AEROQUIP (CANADA) LTD., TORONTO 15, ONTARIO
LOCAL REPRESENTATIVES IN PRINCIPAL CITIES IN U.S.A. AND ABROAD • AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD



It Pays to Specify TRU-STOP Brakes



**because they give you
Real Emergency Braking...Smooth,
Positive Stops...Safe Parking...
and Lower Service Costs**



Longer Lining Life

The terrific heat generated in braking cuts lining life. TRU-STOPS quickly dissipate this heat. Most of the disc is exposed to the air even during braking. And a cooling jet of air circulates through the disc, prolongs lining life.

Real Emergency Braking. TRU-STOPS are real emergency brakes—not just "parking brakes." They serve as auxiliary brakes on long down-grades and can bring the vehicle to a smooth, quick stop if service brakes suddenly fail.

In fact, TRU-STOPS can do this and more. They can handle the vehicle with safety so it can be removed from the road.

Smooth, Positive Stops. Pressure is in direct proportion to the pull on the brake lever. There is no dangerous self-energizing or "over-braking."

Safe Parking. TRU-STOPS hold on grades—prevent "parking brake" accidents.

Lower Service Requirements. TRU-STOPS are mounted directly on the drive shaft. Their simplicity of design and accessibility reduce maintenance requirements. Relining or adjustment is a simple job for any mechanic with ordinary tools. It is not necessary to drop drive shaft.

Specify TRU-STOPS for factory installation on your next vehicle.

*This Booklet gives the complete story on
TRU-STOP Brakes. Send for your copy today*



**Automotive and Aircraft Division
AMERICAN CHAIN & CABLE**

601 Stephenson Bldg., Detroit 2
2216 South Garfield Ave., Los Angeles 22 • Bridgeport 2, Conn.



Let Jack Do It

Continued from Page 100

spected. Repair it if it is damaged. Check your jack before using it.

Set the lifting toe all the way under the load. When using the foot lift, make sure the lifting toe is firmly and squarely placed as far as possible under the load so that when pressure is applied the jack will not slip out and drop the load. During the raising operation, be especially careful to watch the load to see that it does not work too far out on the toe.

Make sure jacks are centered, plumbed and properly blocked. And don't set your jacks on yielding bottoms. If the surface is soft or uneven, block up the jack bottom. Also make sure the head of the jack is against solid part of the load so that movement will not cause the load to slide or rock. To get maximum lift in your jack, always block as closely as possible to your load.

When the lift has been made, block the load. This prevents sudden dropping of the load if the jack is jarred. Never leave a load on a jack without blocking.

Remove the jack handle from the socket after the lift is made. This eliminates tripping over the handle and moving the load while being held on the jack.

Jack Safety

Make sure you are ready to lower before setting the jack in tripping or lowering position. Leave the jack set for lifting at all times. Then if the socket lever is moved the jack will raise, not drop the load. Check to see all tools, equipment, hands and feet are clear before lowering.

Clean, grease and oil your jacks regularly. Remove cover plates to make sure rust and dirt are not clogging inner working parts and that they are properly cleaned and greased. Oil jacks at least once a month, filling all oilers and oiling all moving parts—the ratchet case, key way, standard. Use only low, cold-test oil and grease.

END

Please Resume Reading Page 102



NEW

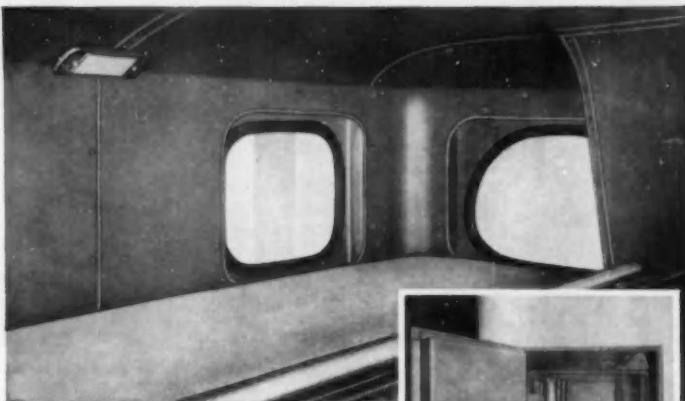
SLEEPER CABS by Automotive Industries ASSURES COMFORTABLE . . . ECONOMICAL REST FOR DRIVERS

Any standard or C.O.E. cab is extended only 22" for the installation of this efficient sleeping compartment. The addition blends in with the smart line of the modern cab.

Cab and sleeping compartment become one integral welded steel unit. Welded steel structural members give Sleeper Cabs greater strength and safety.

Generous ventilation, insulation from sound and outside temperature and four broad windows assure maximum comfort. The berth is easy to enter or leave while the truck is in motion.

Sleeper Cabs by Automotive Industries will pay off for you in saved driver-hours and greater alertness on the road!

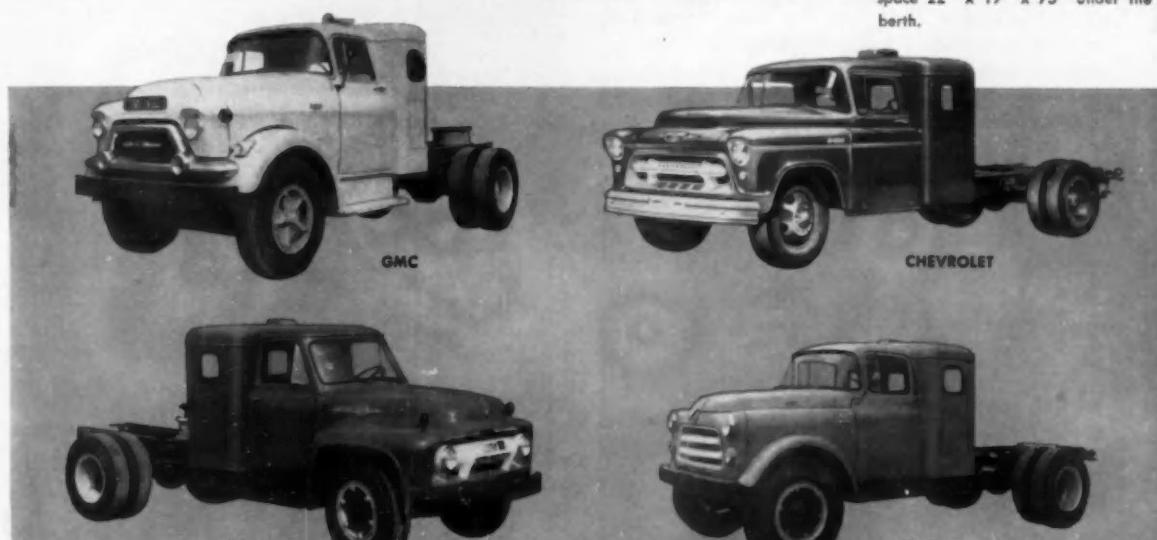


Pullman-type berth with one piece inner spring mattress provides 75" of solid comfort. Dome light is standard equipment.



Flush doors enclose locked storage space 22" x 19" x 75" under the berth.

AUTOMOTIVE INDUSTRIES INCORPORATED • OWENDALE, MICH.



ORDER THESE SLEEPER CAB INSTALLATIONS THROUGH YOUR TRUCK DEALER



Beverly Hills Transfer and Storage Co. moves Dorothy Lamour Howard and family. An alert sales program in which the telephone is used to increase the production of the sales force

THE TELEPHONE HELPS MOVING COMPANY

"We are proof that moving and storage jobs can be sold by telephone," says Ralph Rolapp, General Manager of Beverly Hills Transfer and Storage Company, Los Angeles, California.

Through the company's switchboard go out-of-town calls from salesmen following up newspaper and real estate

leads. One \$6.44 call, to Wheaton, Illinois, obtained a \$2500 moving job. Salesmen also telephone ahead for appointments, 80% of which result in orders.

Here is proof again that Bell System communications services can be tailored and adapted to increase your business, cut your operating expenses.



Beverly Hills Transfer and Storage Co. salesman Carroll Hurley checks newspapers, realtors, for leads on moving jobs into California or from California to anywhere in the U.S. and Canada. He has found that telephone calls have opened doors to many important sales.



Customers can telephone Beverly Hills Transfer and Storage Company without charge from anywhere in the metropolitan Los Angeles area. Plan stimulates customer initiative, attracts many inquiries which turn into orders.



helps the firm act quickly to land the big jobs. (Pictured above: Fred Nason, Jr., Fred Nason, Sr., president of Beverly Hills Transfer and Storage Co., Mrs. Howard and her son.)

MAKE SALES, DIRECT OPERATIONS



Warehouseman D. M. Nickel receiving a call from the main office on one of the company's four private telephone lines. These lines help Beverly Hills Transfer and Storage Co. co-ordinate moves in and out of its warehouses, providing quick, efficient service for customers.

LONG DISTANCE RATES ARE LOW

Here are some examples:

Boston to New York	75¢
Cleveland to Indianapolis	90¢
Pittsburgh to Chicago	\$1.15
New Orleans to St. Louis	\$1.35
Los Angeles to Oklahoma City	\$1.90

These are the daytime Station-to-Station rates for the first three minutes. They do not include the 10% federal excise tax.

CALL BY NUMBER. IT'S TWICE AS FAST.

The teletypewriter pays, too

Many trucking firms and moving companies are utilizing private line teletypewriter service in their everyday operations for dispatching, claim service, sales and administration. This service provides written records—is fast, accurate, two-way and direct—can benefit truckers in the following ways:

1. In-transit time of merchandise is speeded up.
2. Claim costs are reduced.
3. "Empty miles" are held to a minimum.
4. Breakdown time is reduced.
5. Customer service is improved.
6. Emergencies are handled quickly.

A Bell System representative will be happy to show you how teletypewriter service can benefit you.

BELL TELEPHONE SYSTEM

Telephone

Teletypewriter



System Maintenance of Two-Way Radio

Continued from Page 75

This voltage drop—.7 volts—is excessive and should be investigated fully. For example: "A" relay contacts wear out, requiring replacement. Fuses get tired, sometimes even when new they may have too much resistance. Check and replace if voltage drop

exceeds .1 volt. Connections loosen as a result of vibration. Tighten or resolder. Fuse Holders also loosen because of vibration. They lose their temper because of heat resulting from poor contact. Acid causes corrosion. Accumulation of oil and dirt increases contact re-

sistance and the remedial action is to clean contacts, tighten or replace.

Keeping voltage drops to a minimum in a primary circuit is very essential to good system operation. The same rules apply to other sources of power. Dry batteries especially must be checked under full load. Some knowledge of the number of hours of use must be available as an indication of when they most likely will need to be replaced.

AC sources of power are by no means free of trouble. Primary voltages are always suspect in AC circuits as they can often be too high as well as too low. In some cases application of voltage regulators may be necessary. Loose connections on fuses occur even in AC circuits. A hot fuse or connection is always a key point for a maintenance man to investigate.

Primary power sources should be the first check points in preventive maintenance procedures and should be checked periodically.

Unit Assemblages

Unit assemblages include transmitter, receiver, power supply, etc. In maintaining unit assemblies the secret lies in knowing what to do and what to leave alone. Very few adjustments need to be made regularly in transmitter and receiver units. To catch a maximum number of incipient troubles, the technician must use his eyes, his ears, his sense of touch, and meter measurements, as well as his good judgment and past experience.

Basically four types of observation are required:

Listening Tests — An experienced technician can often detect warnings of impending trouble by noting the audio quality, the noise background and the squelch operation in relation to the settings of the volume and squelch controls. He will come to know the normal signal level he should obtain at given locations with selected stations in a particular system. Degradation of performance will be immediately apparent to the technician who checks the set periodically, whereas the steady operator may become accustomed to a gradually degraded performance.

(TURN TO PAGE 130, PLEASE)



TANKS ON TIME... No Lost Motion In Scheduling

"Most efficient product since the wheel," is the conviction about Servis Recorders as expressed by owners of fuel hauling fleets. That's because Servis Recorders help keep scheduled deliveries on schedule—with no lost motion. Servis Recorders show the pumping time, also, and record all delays and idle time.

Our Model DS provides the pumping time record if desired, or will show motor idling if this is important. This second record indicates when the motor is left running unnecessarily. But the Servis Recorder does so much more—write for the whole story. THE SERVICE RECORDER CO., 1375F Euclid Avenue, Cleveland 15, Ohio.

ASK about our TURNOVER SWITCH, to prevent fires in case of turnover.

Write today for
free booklet—
"Ten Ways of
Getting More
Work Out of
Motor Trucks."



The Servis Recorder
Tells Every Move Your Truck Makes



KEEPS 'EM ROLLING!



KESTER ACID-CORE SOLDER helps keep the jobs rolling in fine shape by reducing soldering costs while increasing speed and efficiency.

And those are the main reasons why Kester's the

preferred solder from coast to coast . . . and why it's been so for so many years.

• • •
Don't forget the other Kester products—Radiator Flux Core Solder . . . Plastic Rosin and "Resin-Five" Core Solder for car radio, ignition and other electrical service; also Solid Wire and Bar Solder—Soldering Salts.

KESTER SOLDER

COMPANY 4205 Wrightwood Avenue, Chicago 39, Illinois; Newark 5, N. J.; Brantford, Canada

Two-Way Radio

Continued from Page 128

Visual Inspections—Look for loose bolts, screws and clamps, worn microphone cords, burned out pilot lights, arcing at any point, loose or broken components, burned resistors, or loose connections. A good visual inspection not only is a means of quickly locating the source of trouble, but

may prevent more serious trouble from developing later.

Touch—The fingers are good detectors of improper temperature conditions. Fuses, fuse holders, crystal ovens, transformers and relay coils which are too hot mean trouble. Also, a cold crystal oven, tube or resistor that should normally be warm is probably in trouble. Such tests are quick and should be used often.

Meter Measurements—Actual

quantitative measurements of "A" and "B" voltages, grid and plate currents, power output, frequency and deviation have no substitute; their meaning is definite. Experience will indicate to what degree variation can be tolerated.

Good test equipment is essential to good system performance. Test equipment is not an expense—it is an investment. Its cost can be recovered in the saving of time and material on any system operation. It is a tool to do the work quicker, more easily and better.

Antennas

Visual check of antenna, line and tower lights, mobile antenna mount, cable, and connectors should be made periodically, as well as a meter check to find any open or shorted lines or high standing wave ratios. Remember that the antenna must efficiently radiate the power developed in the transmitter chassis and also transfer to the receiver the minute voltages picked up from the distant transmitter to produce a good audible signal. Failure of the antenna or line is a failure of the communications system.

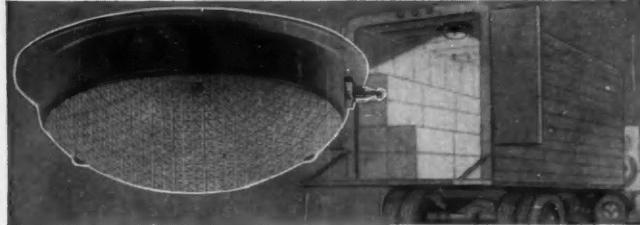
Some radio communications systems have been operating with no safety factor whatever, and the slightest drop-off results in a trouble call. Such systems cannot be maintained at a reasonable cost. On the other hand, many systems have a quite adequate safety factor and these systems

(TURN TO PAGE 132, PLEASE)

for greater safety

K-D's better light

for the loading area



KD 529 WITHOUT SWITCH . . . KD 529SW WITH SWITCH

There are no dark spots with KD 529. Oversize 5" shatterproof clear plastic lens designed to give an even intensity of light in all directions . . . a smooth pattern without shadows . . . facilitates loading and unloading day or night. Flush type mounting . . . no

disassembly . . . no panel opening . . . three screws hold lens . . . rubber washers prevent dropping screws. 21cp bulb . . . six or twelve volt. Heavy gauge borderized steel . . . baked gray enamel finish. Minimum depth . . . only 15/8". Flange diameter: 57/8".

one source for interior lights



KD 530

KD 530 . . . decorative as well as useful. Moonstone lens . . . 43/4" x 27/16" . . . designed for correct light spread.



KD 528

KD 528 is easily mounted on any flat surface. Moonstone semaphore 3" lens with or without built-in toggle switch.

The Complete Line Truck Mirrors, Stop and Rear Lites, Reflectors, Clearance Marker Lites, Turn Signals are representative of K-D's complete single-source service.

K-D LAMP COMPANY

1910 ELM STREET • CINCINNATI 10, OHIO
WAREHOUSES: BOSTON - CHICAGO - LOS ANGELES
NEW YORK - PHILADELPHIA - SEATTLE - TORONTO



"We have the boss's wife to thank for these uniforms!"

YORK-HOOVER

COMMERCIAL TRUCK BODIES

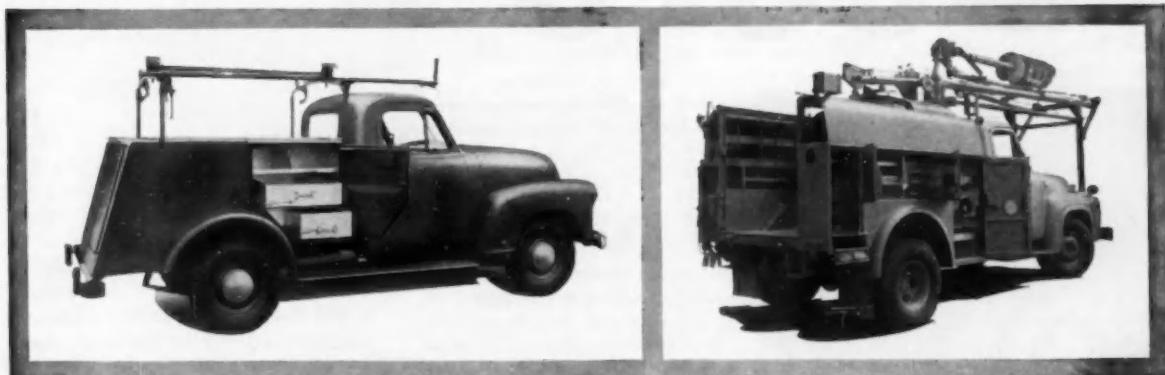


Lightweight construction, rugged durability, and cost-saving efficiency are features of this Railway Express Agency Body built by York-Hoover.

Whether you are a manufacturer, distributor, or retailer, your investment in York-Hoover Commercial Bodies pays off in longer, better, cost-saving service for you.

YORK-HOOVER

PUBLIC UTILITY BODIES



The York-Hoover Model 20IU76 "Proven" Service Body provides fast and economical service in the public utility industry daily because all materials and tools are readily accessible.

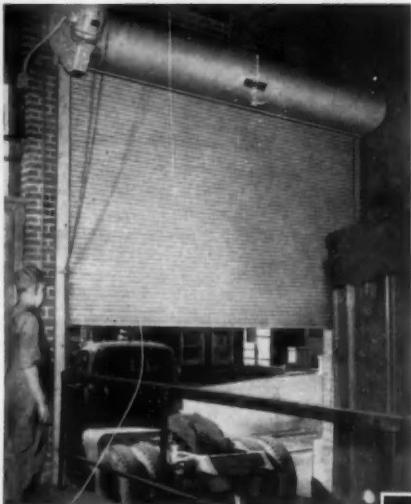
The York-Hoover 5000 WD Two-Man Line Body will dig a hole and set the pole in a matter of minutes, all within full view and control of the truck operator.

*Contact us for solutions to
your truck body problems.*

BODY DIVISION
YORK-HOOVER CORPORATION
YORK, PENNSYLVANIA

**YORK-HOOVER SPECIALIZES IN CUSTOM BUILT
TRUCK BODIES IN STEEL AND ALUMINUM
FOR EVERY TRANSPORTATION NEED**

Kinnear Rolling Doors



The KINNEAR Mfg. Co.

FACTORIES:
2100-26 Fields Avenue, Columbus 16, Ohio.
1742 Yosemite Ave., San Francisco 24, Calif.
Offices and Agents in All Principal Cities

Saving Ways in Doorways

KINNEAR
ROLLING DOORS

Two-Way Radio

Continued from Page 130

sometimes deteriorate to an amazing extent before complaints arise. However, the technician should know to what extent he can allow transmitter power output and receiver sensitivity to drop without degrading operation. It is perfectly sensible economy to get all the performance possible out of each component, but there is always a danger point below which performance must not be allowed to sink. Only frequent inspection will show when equipment is approaching that point.

Netting

Netting of receivers and transmitters in any system is more important than usually realized. The term "netting" means that all receivers and transmitters in a given system are aligned on the same frequency. With modern selectivity requirements, it is more than ever necessary to tune every receiver exactly to the station it must receive. Careful "netting" of all units in an integrated system to the correct frequency is a first order requirement of a modern communications system and will eliminate a prime cause of poor system performance.

Frequent checks of transmitter deviation will also do much to improve system operation. Frequency and deviation checks are more important from a system operation standpoint than the twice-yearly FCC regulations seem to indicate. The technician should be sure that transmitters are swinging a normal ± 15 kc for standard channel and ± 5 kc for split channel operation. Under-deviation does not develop the full advantages of frequency modulation.

A good rule to follow is to check performance frequently and make adjustments only when actual tests and measurements show improper operation. Adjust nothing without meters and signals to indicate actual conditions. This is one area in which your ear isn't a good meter.

END

Please Resume Reading Page 76

Performance Records Prove Eaton Free-Valves DO Last Longer!

CONVENTIONAL VALVES

Failure unpredictable—anywhere between 5,000 and 40,000 miles. Impossible to set up dependable preventative maintenance schedule.

EATON FREE-VALVES

Still in good condition after 100,000 or more miles, permitting preventative maintenance scheduling. No in-between servicing necessary.



The Eaton Free-Valve is free of any restraining force set up by the valve spring. The normal creeping tendency of the valve causes it to take infinitely variable positions with respect to the seat at successive lift cycles.

The common goal of valve and engine manufacturers—and truck operators—is to obtain valve life equal to that of other major components, thereby eliminating the necessity for valve servicing between major overhauls. Performance records covering millions of miles of heavy-duty operation prove that Eaton Free-Valves have achieved this goal.

Eaton Free-Valves are genuinely "free"—free to turn at random in either direction, during a major portion of the lift-cycle. This free-floating action wipes stem and seat free of deposits; keeps a film of oil on stem and guide surfaces. Scuffing is prevented, wear is reduced. Hot-spots due to local leakage are eliminated. Longer valve life is a natural result.

Our engineers will be glad to explain how Eaton Free-Valves can be applied to engines of all types and sizes.

EATON

VALVE DIVISION
MANUFACTURING COMPANY
9771 FRENCH ROAD • DETROIT 13, MICHIGAN



PRODUCTS: Sodium Cooled, Poppet, and Free Valves • Tappets • Hydraulic Valve Lifters • Valve Seat Inserts • Jet Engine Parts • Rotor Pumps • Motor Truck Axles • Permanent Mold Gray Iron Castings • Heater Defroster Units • Snap Rings • Springtites • Spring Washers • Cold Drawn Steel • Stampings • Leaf and Coil Springs • Dynamatic Drives, Brakes, Dynamometers

Fuller's New RoadRanger

Continued from Page 96

selection of the operating range required. The automatic shift in the auxiliary transmission after pre-selection is always accompanied by a 4-step shift in the 5-speed transmission, either up or down, depending upon the direction of the shift in the auxiliary.

If the auxiliary shift is upward, the corresponding 4-step shift in the front section is down. If the auxiliary shift is down, the 4-step shift in the front section is upward.

To operate the all-air shift "RoadRangers," the driver starts

the engine with the shift lever in neutral position. When the air system reaches normal line pressure, he makes sure that the range selector handle is in low range position. This assures him that the auxiliary section is in low range, and he can shift progressively through all five speeds of the front or 5-speed section.

In going from fifth to sixth speed, the operator pulls the selector handle up to the high range position. As the shift lever passes through neutral, the auxiliary section automatically air shifts from low range to high range. He then shifts progressively to each higher speed in the regular manner.

The process is merely reversed for the down shift. When the driver has reached sixth, he pushes the selector handle down to the low range position and shifts the front section from sixth to fifth. As the lever passes through neutral, the auxiliary section now air shifts automatically from high range to low range. He then shifts progressively to each lower speed in the regular manner.

Skip Shifting

Skip shifting, often desired to offset a particular operating condition, is easily accomplished. All that the driver has to do is make sure, when skip-shifting UP, that the selector handle is pulled up to the high range position before making the shift which passes fifth speed. And, when skip-shifting DOWN, he must be sure to push the selector handle down to the low range position before making the shift which passes sixth.

Also, drivers may safely coast in high range with the clutch disengaged when slowing down for a "stop" or "slow" sign. However, they should not make the shift to low range until it is once more necessary to accelerate the vehicle. Shifts from high range to low range at high vehicle speeds should not be made. Neither should range shifts either up or down be made when the vehicle is moving in reverse.

END

Please Resume Reading Page 98

Model 98 ECO Tireflator.
Other models for mounting on wall, pillar
or post and with remote reel.



JOHN WOOD COMPANY

Bennett Pump Division, Muskegon, Michigan
In Canada: Toronto • Montreal • Winnipeg • Vancouver

NOW!



Turbodiesels

96" FULL COMFORT

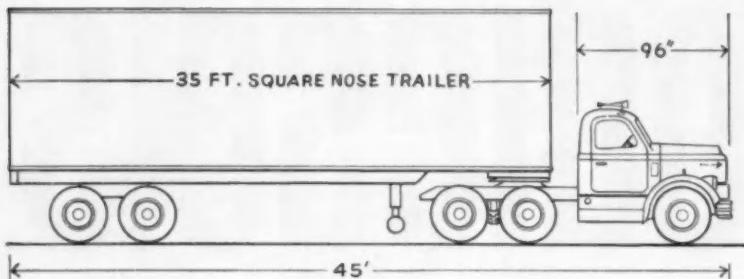
...at no premium price!

REO 96" A SERIES

with Cummins 175 h. p. JT-6B Turbodiesel

All the rugged engineering features of the *world's toughest trucks* plus exceptional maneuverability and roomy driver comfort of full-size conventional cab. *96" cab tractor pulls modern high-capacity square-nose trailers within 45' overall.* Tandem and single axles. All standard wheelbases for straight truck and truck-trailer uses, on or off highway. Models up to 48,000 G.V.W. or 62,000 G.C.W.

Reo A Series also in Gas or LPG Gold Comet short-stroke, wet-sleeve V-8s, 195—220 h.p.



CAB



REO FULL COMFORT CAB...

at no premium price!

REO F SERIES

with Cummins 175 h.p. JT-6B Turbodiesel



All the famous engineering and rugged-duty construction features of the *world's toughest trucks* in a highly maneuverable, easy-handling conventional style cab. Roomy comfort reduces driver fatigue. Smooth, low-vibration-level performance under extreme loads at high throttle.

Tandem and single axles. All standard wheelbases for straight truck and truck-trailer uses, on or off highway. Models up to 48,000 G.V.W. or 62,000 G.C.W.

Reo F Series also available with Gas or LPG Gold Comet Engines—short-stroke, wet-sleeve sixes—from 107 to 160 h.p.

COMING SOON! 200, 250 and 300 h.p. Turbodiesels in the new Reo Super-V 63 (COE).

• what's next...watch

MAIL FOR COMPLETE INFORMATION TODAY!

REO MOTORS, INC., DEPT. 8
LANSING 20, MICH.

Please send, immediately, information on Reo Diesels:

"A" Series _____ "F" Series _____

New Reo Super V (COE) _____

Gold Comet "6" _____ V-8 _____ Gas _____ LPG _____

NAME _____

COMPANY _____

TITLE _____

ADDRESS _____

CITY _____

COUNTY _____

STATE _____

REO

LANSING 20, MICHIGAN

SUBSIDIARY OF BOHN ALUMINUM AND BRASS CORPORATION

TORONTO, ONTARIO

WORLD'S TOUGHEST TRUCK

Gaging the GM Diesel

Continued from Page 68

8. Shift turbine into direct drive.
9. Operate engine at 900 rpm. Gage reading should be the same as reading under "5" or the same as clutch in neutral position.

If reading is higher than "5" overrunning clutch is pulling turbine.

A fourth pressure gage used on 4007 and 4008 model GM coaches will check condition of hydraulic system in the torque converter. It is connected to the top cooler line at top cooler core connection. On the 4008's our standard reading is 45 psi at stall speed and 35 psi on the 4007 coaches.

This reading on 4008's indicates whether the restricted fitting on gas off line is oversized, if clutch



Inspection Supervisor Wingate manipulates hand throttle, checks gages

is slipping, if torque filter is dirty, or if fuel pump outlet pressure is too low. This reading is balanced against tachometer reading.

On the 4007's it indicates existing trouble in injector, such as weak spring ball not seating properly, nozzle to case gasket leaking, injector nozzle damaged, check valve between supply tank and injector not working properly, or fuel line supply tank to injector leaking.

The vacuum gage is used on model 4007 coaches on sump tank to supply tank line to indicate efficiency of aspirator. It indicates correct positioning of nozzle in aspirator and also condition of the aspirator filter. A reading of 16 in. of vacuum at 1000 rpm indicates top aspirator efficiency. The aspirator can also be checked at bench by applying 35 psi of air at

inlet and measuring vacuum pull at sump line inlet. Vacuum pull can be adjusted by tightening nozzle against paper gasket.

Gaging Exhaust Pressure

We also have a pressure gage fitting mounted in the exhaust

manifold. Since this is extremely difficult to reach on the front side of the engine, we do not use it unless there are other indications of trouble. But when necessary, we can tell whether there is back pressure anywhere in the exhaust system. For this we use the mercury manometer.

Main Airline Check Valve

Still another pressure gage is at
(TURN TO NEXT PAGE, PLEASE)

ACCIDENTS CAN COST!

- LIVES
- MONEY
- LAWSUITS



Speed Kills



Governors

REDUCE

Accidents

KING-SEELEY CORPORATION
ANN ARBOR, MICHIGAN



Gaging the GM Diesel

Continued from Page 139

tached to the bottom of the ping tank in the compressor air pressure line and gives an immediate reading as to whether or not the check valve is working properly. Correct pressure should be 5 psi, and this reading is taken with the main air tanks drained and pet cocks open. If the reading is above

5 psi, we know that the check valve is not operating or opening properly. (Note: This test is not made at the same time as other checks since it requires draining the air tanks.)

Blow-by Check

The manometer or water U-tube is connected to the oil dipstick tube. On the 4-cyl engine, our standard reading is 2 in. of water; on the 6-cyl, it can vary from 2 to

5 in. of water. If the reading is too high, we know that we have blow-by past oil rings; if it is too low, we know that our crankcase is at least partially open to the atmosphere and check on crankcase outlets.

Pyrometer Checks

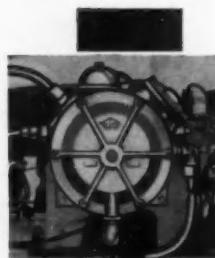
With the pyrometer we then move inside the coach. Through the rear seat opening we take a reading on each exhaust stack. Here we set no maximum or minimum but fix a differential between stacks at a maximum of 10 deg. If any of them are low we know that that particular cylinder is not



A RECOGNIZED LEADER IN THE TRUCK FIELD

**Chooses ALGAS
LP-Gas equipment
for two fine
V-8 engines**

Once again, advanced engineering has brought two improved V-8 engines by REO, a recognized leader. Here are two engines, one for the truck field and one to be used for industrial purposes... both incorporate Reo's high standards of quality and performance. Once again Reo has made exhaustive tests and chosen ALGAS LP-Gas carburetion equipment to bring you the finest performance and lowest operating costs possible.



Close-up
of ALGAS
equipment
installed
on REO
engine

Depend on
ALGAS for
the best
LP-Gas
equipment

Follow the choice of leaders like Reo and choose ALGAS for every LP-Gas installation. ALGAS is continually working to bring you the most modern equipment that will keep pace with improvements made by all engine manufacturers.



Write today for complete information regarding equipment to meet your needs.

AMERICAN LIQUID GAS CORPORATION
1109 Santa Fe Avenue • Los Angeles 21, California



With rear seat out, pyrometer readings are taken at each exhaust stack

carrying its full load. This may be due to a variety of reasons including balance, timing, and/or dribbling of injectors. This one check alone can save 50 min over normal time for removing rocker cover and using standard methods of manual check.

Because rocker covers are normally never removed, we have no visual check on fuel leaks or signs of poor lubrication. Hence we pay very special attention to the condition of lubricating oil using laboratory analysis or a viscosity gage. For this last item we have ordered a Gerrin engine wear meter, which we hope will give us a true reading on viscosity index regardless of oil temperature.

END

Please Resume Reading Page 69

1st Road Truck Driver: "I took that pretty diner waitress home the other night and stole a kiss."

2nd Road Truck Driver: "What did she say?"

1st Road Truck Driver: "Will that be all? I have some nice dessert!"

Today's Fastest and Most Satisfactory Refinishing Combination!



- *Outstanding in workability, durability and appearance!*

MORE and more paint shops are finding they do faster, more economical work that gives customers utmost satisfaction when they use Ditzler's famous DITZCO Quickset Enamels with Ditzler's 202 FLO-DRY Enamel Reducer.

● Primarily designed for refinishing metal bodies, DITZCO Quickset Enamels are made from the same basic formulas used for many of today's new passenger cars and commercial vehicles. The consistently dependable performance of these enamels has been one of the chief reasons for Ditzler's growth to the largest *exclusive* manufacturer of automotive finishes.

● These popular DITZCO Enamels are available in hundreds of solid colors, in a wide range of polychromatic and symphochromatic hues, and in blacks, whites and silver.

● When combined with recommended proportions of Ditzler's 202 FLO-DRY Enamel Reducer, DITZCO Enamels give you smoother flowout and an earlier initial set. This special thinner assures harder drying, better leveling, higher luster and longer-lasting beauty. Shops doing fleet painting find 202 FLO-DRY unusually helpful because of the speedier through drying required for taping and handling.

DITZLER COLOR DIVISION, Pittsburgh Plate Glass Company, Detroit 4, Michigan



DITZLER

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS • FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



Need a jack,
JACK?

BUY WALKER NOW
AND SAVE TWICE!

SAVE! ✓

with WALKER'S BIGGER VALUES!
You get Walker high quality, as
always—more jack per dollar
than ever!

SAVE! ✓

with WALKER'S EXTRA FEATURES!
Designed for truck lifting—to as-
sure fast, safe and dependable
pay-load delivery.

WALKER LEADS IN **JACKS**

WALKER MANUFACTURING CO. OF WISCONSIN • RACINE, WISCONSIN



**PRICES BEGIN
AT ONLY
\$880**

WALKER "SERIES 900"—8 MODELS TO CHOOSE FROM

No.	Ton Capacity	Price
906	1 1/2	\$ 8.80
925	3	14.95
930	5	17.10
935	8	20.45
945	12	27.55
953	20	46.00
960	30	89.30
965	50	135.00

JACKS • EXHAUST SILENCERS • OIL FILTERS

All prices
Suggested Dealer Net.

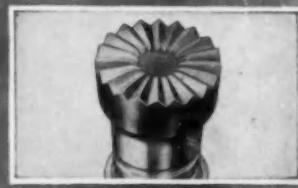


There's a Walker
"Series 900"
Portable Hydraulic
Jack for Every
Type of Truck.

**GET THESE
PLUS-PERFORMANCE
"900" FEATURES**
See your Walker Jobber!



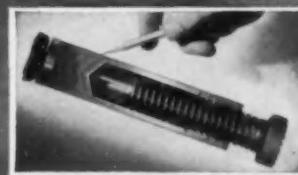
Armor-Designed "Projectile"
Tank to withstand shock.



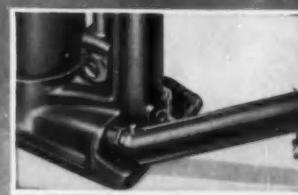
"Self-Locking" Extension
Screw with
Non-Breakable Integral Cap



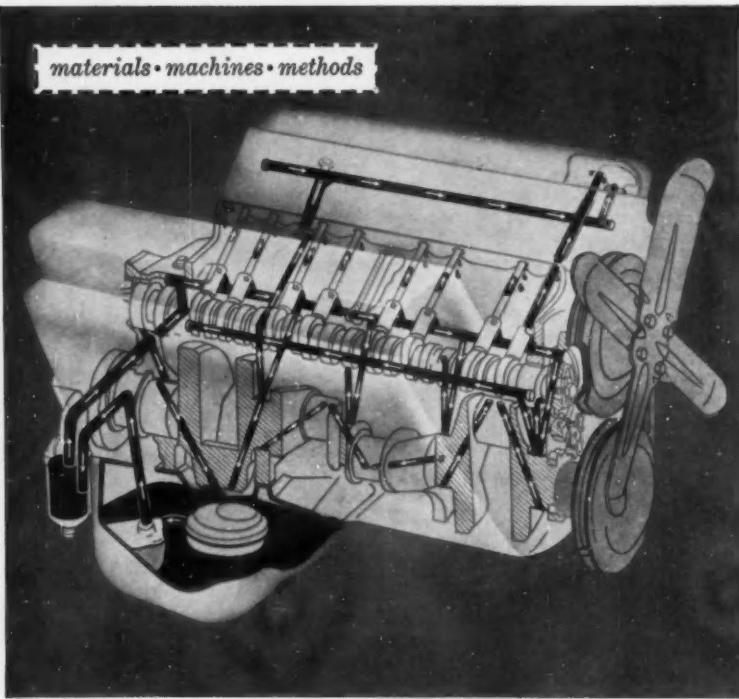
"Pendulum Balance" for
easy, fast positioning.



"Solid-End" Lifting Ram
resists eccentric loads



"Micro-Accurate" Release
for safe lowering



Cuts Oil Costs and Gives Sludge-Free Operation

It is well known that operating conditions and types of engines play an important part in the sludging tendencies of your units. For maximum operating efficiency, you can tailor-make the oil in the crankcase to meet any operating condition.

Magnus Metaffin permits you to use regular oil instead of premium HD grades and obtain greater engine efficiency through the elimination of sludge build-up. Add more for those units that sludge up more quickly on stop and go service—less for those used on long hauls where sludge is less of a problem.



Find out how Metaffin can increase the operating efficiency of your entire fleet—at less cost—by writing to Magnus Chemical Company, Inc., 38 South Avenue, Garwood, N. J. for a copy of new bulletin 23-R.



AUTOMOTIVE DIVISION

MAGNUS CHEMICAL CO., INC.

—a world-wide organization specializing in cleaning and protection of all surfaces.

Fleet Course Calendar

HERE is an up-to-date calendar of fleet training courses for 1956. For complete addresses to write to for further information about the courses listed, see the Fleet Course Directory appearing in the November 1955 issue, page 300.

Driver Training

North Carolina State College (Four-week course beginning on the dates given.)—Mar. 26, Apr. 30, May 28, July 2, July 30, Sept. 3.

Driver Trainer

Pennsylvania State University—Apr. 16-20.

Effective Fleet Operation

(Unless otherwise noted, these courses begin on the date given and meet once a week in the evening for 8-10 weeks.)

Western Reserve University (Ohio)—Mar. 15 (Cleveland).

Purdue University (Ind.)—Mar. (South Bend).

Northwestern University (Ill.)—Mar. 20 (Evanston).

University of Wisconsin—Spring, 1956 (Milwaukee).

University of Tennessee—Spring, 1956 (Knoxville).

University of Akron (Ohio)—Spring, 1956 (Akron).

Southern Methodist University (Texas)—Spring, 1956 (Dallas).

Fleet Maintenance

University of California—Mar. 14-16 (Richmond); Mar. 21-23 (Los Angeles).

University of Washington—Mar. 19-21.

Montana Motor Transport Assn.—Mar. 26-28.

University of Washington—Apr. 2-6.

Fleet Supervisor

University of Oklahoma—Mar. 19-23.

North Carolina State College—Mar. 26-28 (Winston-Salem).

University of Washington—Apr. 2-6.

University of Florida—Apr. 9-13.

University of Maryland—Apr. 9-13.

Northeastern University (Mass.)—Apr. 23-27.

Supervisor 2-Day Conference

Pennsylvania State University—May 10-11.

Bendix Products Division

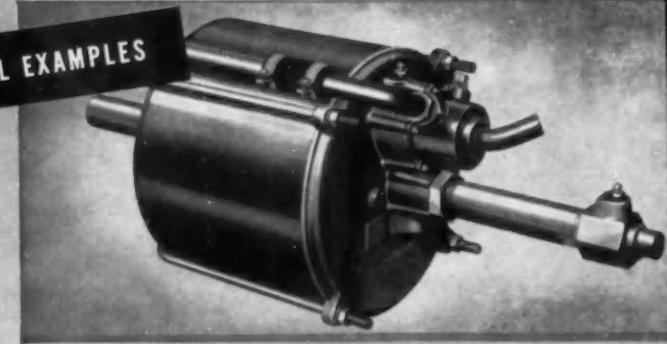
A good reliable source

FOR AUTOMOTIVE EQUIPMENT

From four wheel brakes to the latest development in power braking, Bendix Products Division has demonstrated its unique ability not only to keep pace but *actually to anticipate* the industry's requirements for the latest and most efficient in automotive components.



TYPICAL EXAMPLES



BENDIX LINKAGE TYPE POWER STEERING—Because Bendix* Power Steering is of the linkage type, manufacturers find it especially adaptable for production line installation without extensive engineering changes. Manufacturers can now meet the ever-increasing demand for power steering more efficiently and more economically with Bendix Linkage Type Power Steering.

BENDIX HYDROVAC POWER BRAKE—With over four million in use, the Bendix Hydrovac* is the world's most widely used power brake for commercial vehicles. This overwhelming preference for Hydrovac is a result of sound engineering design, exceptional performance, low original cost and minimum service upkeep. Make the industry's choice your choice.

BRAKES • POWER STEERING • POWER BRAKING • CONSTANT VELOCITY UNIVERSAL JOINTS • HYDRAULIC REMOTE CONTROLS

BENDIX PRODUCTS
DIVISION SOUTH BEND INDIANA
DIVISION OF

Bendix
AVIATION CORPORATION

Export Sales: Bendix International Division, 205 East 42nd Street, New York 17, N. Y.

*REG. U. S. PAT. OFF.

Chevrolet . . .

Continued from Page 91

drive, according to the driver's choice. Contained in the same gearbox with a three-speed auxiliary transmission, the divider eliminates the need for a differential between the axles.

Parallel-type frames are used on the heavy-duty models and additional strength is built into

those equipped with tandem units. The standard front axle I-beam is rated at 7000 lb, over 50 per cent stronger than in the medium-duty group. Anti-friction roller bearings are installed at each kingpin to receive the thrust and permit easier handling. A new power steering cylinder with longer stroke is optional for heavy-duty trucks.

Front and rear brakes have been increased in size and effec-

tiveness on two groups of the new models. A new option this year is the air-over-hydraulic brake for the 2- and 2½-ton units. Vacuum-powered 9½-in. "Hydrovac" brakes are standard on all heavy-duty models.

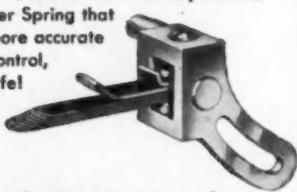
Other features of the complete line include tubeless tires, sealed beam headlamps and a 12-volt electrical system.

END

Please Resume Reading Page 92

HOOF GOVERNORS SAVE YOU MONEY

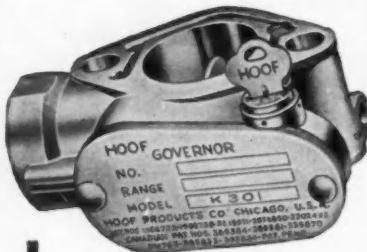
No other Governor has Hoof's patented Cantilever Spring that means more accurate speed control, longer life!



Write for New HOOF Catalog

HOOF PRODUCTS CO.,

6543 So. Laramie Ave., Chicago 38, Ill.



No other single item you buy, costs so little and saves so much! Proof? Twenty-eight years of field duty in hundreds of fleets, everywhere!

Dairy Fleet

Continued from Page 98

loaded and unloaded by hand. Power conveyors are used to load and unload ice cream.

Adequate refrigeration is essential in moving perishable dairy products over long distances. Before we purchased the new units we used ice to keep the loads cold while in transit, plugging the trailers' reefer units into power outlets while they were standing at the terminals.

The power converter axles make it possible to furnish power to the refrigeration unit while the trailer is moving. Instead of the load's temperature rising from 10 to 15 deg during a trip, as it did previously, we can now hold loads constant at any desired temperature. Usually we refrigerate ice cream at -14 deg F. and milk at from 35 to 40 deg F.

In addition to powering the refrigeration unit, the live axle can furnish power for fans, pumps and other mechanical devices if needed. Our present milk trailers have blower units at each end, while the ice cream trailer is equipped with serpentine flash plates.

A stand-by electric motor is standard equipment on the trailers. This can readily be plugged in for refrigeration when the trailer is standing still at the terminals. With the live axle, however, there is no need for an auxiliary gas motor.

END

Please Resume Reading Page 100

COMMERCIAL CAR JOURNAL, March, 1956



Reduce Glare with E-Z-EYE in your trucks!

Millions of cars (like the one in this picture) are equipped with E-Z-EYE glare-reducing windshields. Doesn't it make sense to have the same glass in your trucks?

When your eyes are protected from glare, you're more relaxed and fresher during long hours on the road.

Be sure your next truck has an E-Z-EYE windshield with its neutral-blue shaded band. For further details call your Libbey-Owens-Ford Distributor (listed under "Glass" in the yellow pages of phone books). Or write Dept. 5436, Libbey-Owens-Ford Glass Company, 608 Madison Ave., Toledo 3, Ohio.

E-Z-EYE SAFETY PLATE GLASS

with the shaded windshield

Reduces Glare, Eyestrain, Sun Heat

LIBBEY - OWENS - FORD GLASS COMPANY • TOLEDO 3, OHIO



Inland Slashes Costs

Continued from Page 92

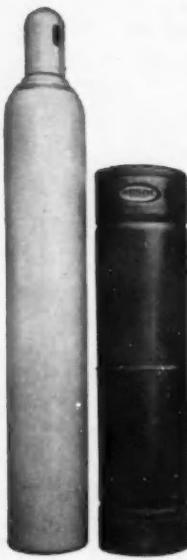
sidewall. A file card is then made out for that tire, and all relevant information written onto the card during the life of the tire.

That information includes original cost, mileage, and any maintenance costs such as tube repair, recaps, sections, etc. Labor costs

of repairs are also included. Mileage is written into a truck's log book by the driver, who turns in his book to the office when it has been filled out, usually within a week. Information about each of the tires is then transferred onto the tires' file cards.

DEMURRAGE PROBLEMS?

THESE LEASE CYLINDERS →
MAY BE THE ANSWER



• AVOID DEMURRAGE CHARGES

If regular loan cylinders last you longer than 30 days, you can avoid demurrage charges with these lease cylinders.

• CHOICE OF CYLINDER SIZES

Two sizes each of oxygen and acetylene cylinders are available under lease agreement.

• STEADY SUPPLY ASSURED

Stocks of full cylinders are maintained in even exchange for your empties. You pay only for gas. No waiting for cylinders to be filled.

• NO MAINTENANCE OR REPAIR COSTS

LINDE maintains your lease cylinders against normal wear and tear and retests them periodically at no cost to you.

• ASK FOR FULL DETAILS TODAY

Let your LINDE distributor show you how much you can save by leasing oxygen and acetylene cylinders. Or write for further information. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y. In Canada: Union Carbide Canada Limited, Toronto.

Cylinder	Style	Capacity, cu. ft.	Height, in.	Diameter, in.	Weight	
					Full lb.	Empty lb.
Oxygen	Q*	80	35	7½	70	65
	S	150	51	7¾	92	80
Acetylene	WQ	60	24¼	7¾	55	51
	WS	133	35½	8½	78	69

*In some areas, Style XL, 70 cu. ft.

GET IT FROM YOUR **LINDE** DISTRIBUTOR

The term "Linde" is a registered trade-mark of Union Carbide and Carbon Corporation

Tire Recapping

Besides its other advantages, information contained on the file cards has enabled the two carriers to develop a cost-saving method of handling recaps. Says IMF, "We know that recapping can be overdone, but we've also found that we can save considerable money over new tire purchases if we handle recaps with discretion. Obviously, a recap costing \$20 that gives just as much mileage as a new \$100 tire is a worthy investment. On the other hand, a recap job including several sections that costs \$40 and gives just 50 per cent as much wear as a new tire is an illusory economy."

IMF sets a maximum of \$40 on any recap job and a limit of two recaps on any tire. The reason for the latter rule is that IMF has found that a tire on its third recap will break down after only 25 to 50 per cent as much mileage as a new tire will give.

Terminal Costs

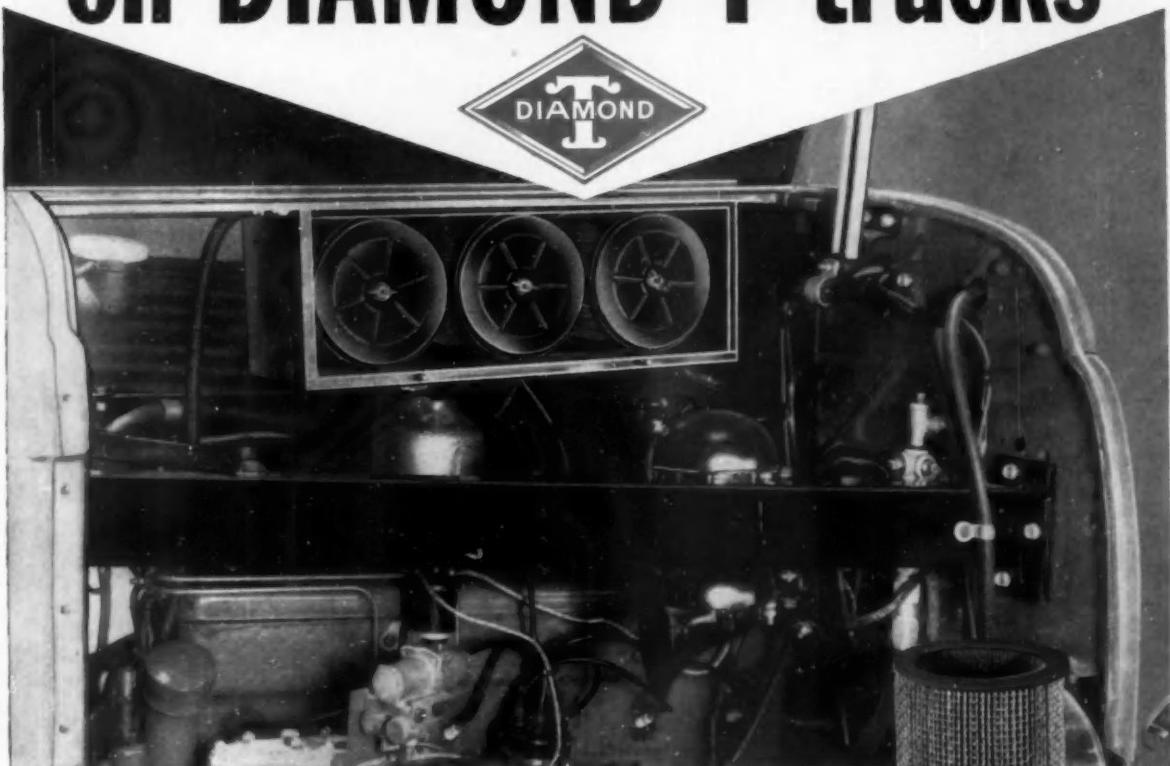
A general revision of freight handling methods at all terminals has been responsible for a major share of cost cutting during the last two years, IMF reports. Drag lines and carts were installed at the Seattle, Spokane, and Portland terminals.

Typical were the freight handling problems that had developed at the Spokane terminal. There they had 35 to 40 men using hand trucks and handling about a million pounds of freight every 24 hours. The result was that the depot was chronically overcrowded with men, and all freight had to be handled at least twice. Moreover, the supervisors had difficulty in keeping track of the men under them, so it was difficult to know which men were working most effectively and which, if any, were not doing a good day's work.

To correct the situation, a drag line was installed two years ago at a cost of \$17,500. The loading platform was operated in the same general manner as formerly, with city trucks loading and unloading at one side of the platform, and inter-city rigs at the other. In moving freight from city to inter-city trucks, freight for a particular

(TURN TO PAGE 152, PLEASE)

FRAM Air Filters now standard equipment on DIAMOND T trucks



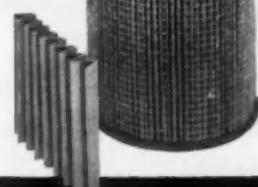
**3 FRAM Super Kleen Carburetor Air Filters—
99.5% efficient—cut engine wear, guard power**

Now famous Diamond T truck engines enjoy the protection of FRAM Carburetor Air Filters, to preserve power, reduce wear and lengthen life. FRAM will safeguard these Diamond T engines even under the most severe dust conditions.

The FRAM Carburetor Air Filter is the most advanced method of air filtration.

It retains high filtering efficiency throughout long life and its low-cost replacement cartridge can be serviced in less than a minute!

FRAM Super Kleen Carburetor Air Filters on your vehicles will cut down-time, add extra miles, pay off in profit. Prove it to yourself—for longer service at less cost per mile get FRAM for your engines!



FRAM CORPORATION, Providence 16, R.I.

Fram Canada Ltd., Stratford, Ontario



It takes a lot of work to deliver a loaf of bread

Federal Bakery Co., Winona, Minn., makes it as easy as possible—uses only STANOLUBE HD-M Motor Oil

Everyone expects bread to be delivered fresh and on time. The housewife makes no allowances for rugged delivery schedules, bad weather, tough roads. Federal Bakery Company makes fine bread and delivers it to Southeastern Minnesota and Western Wisconsin *on schedule* no matter what the weather. A good PM system and the use of STANOLUBE HD-M Motor Oil in all of the company's trucks are two of the big reasons why Federal gets the job done.

And getting the job done is not just good enough for Federal. The Federal fleet of 40 Ford units—F-1's to F-600's—has one of the lowest cost-per-mile records in the Quality Bakers of America membership. Federal Bakery trucks have as much as 100,000 miles without even the pan removed. Other units have 250,000 miles on the chassis with many, many more miles still to go.

This kind of performance from equipment is routine for Federal Bakery. Helping trucks deliver low cost-per-mile service is routine for STANOLUBE HD-M Motor Oil.

The hot engine, long haul of Federal's over-the-road units, or the short trip, low temperature, frequent idling service of street delivery equipment—it is all the same to STANOLUBE HD-M.

Handling extremes of service, no matter what it is—in diesel or gasoline equipment—is built into STANOLUBE HD-M. Its highest quality base stock and additive formula mean clean engine performance, no varnish, no sludge, no carbon-like deposits.

Find out more about STANOLUBE HD-M Motor Oil. Call your Standard Oil automotive lubrication specialist. There is one near you in any of the 15 Midwest and Rocky Mountain states. Or write Standard Oil Company, 910 South Michigan Avenue, Chicago 80, Illinois.



Standard Oil's Stan Nelson (left), with Federal Bakery men (l. to r.); E. L. Hostettler, general sales manager; C. F. Baumann, garage superintendent and Wendel Fish, general manager, inspects one of bakery's trucks that has 100,000 miles of service and yet has required no major maintenance.

Federal Bakery Co., Winona, Minn., keeps close watch on maintenance costs, has one of industry's lowest cost-per-mile records. S. E. Nelson (left), Standard Oil automotive lubrication specialist, Arne Steivang (center) and Charles Baumann, Federal Bakery garage superintendent, confer about truck maintenance records. Helping customers with lubrication problems is something Stan Nelson is well qualified for. An engineer with a degree from the University of Minnesota and a graduate of Standard Oil Sales Engineering School, Stan has eight years' field experience. Customers have found that help from Stan Nelson pays off—for them.



STANDARD OIL COMPANY
(Indiana)

Inland Slashes Costs

Continued from Page 148

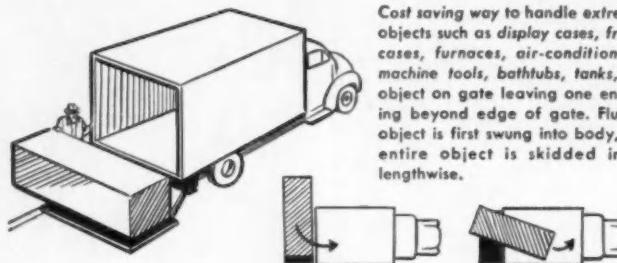
destination is loaded onto one or more carts, which are then hooked up to a chain on the drag line. When the cart reaches the point on the other side of the platform corresponding to its destination, it is taken off the line. It is then rolled directly onto the truck that is loading, or placed in the center section of the platform for later

loading. The same method is used for transferring freight from road to city trucks.

"Labor has been reduced in at least two ways: by cutting the handling in half, and by transporting the freight mechanically from one side of the platform to the other," says IMF. "The result is that we can now handle with 12 to 15 men what formerly required between 35 and 40. Similar savings have been effected in our Seattle and Portland terminals. Damage

has also been reduced by the elimination of much handling. And although we have increased our platform facilities in some terminals, we have not had to increase them as much as would have otherwise been necessary. While drag lines are not practical in most of our smaller terminals, we have changed over from hand trucks to the same four wheel carts at those terminals. We have realized the same advantages there from elimination of much handling, with lowered labor costs."

Here's trucking AUTOMATION that lets you combat High Cost Hauling

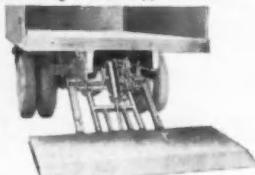


Cost saving way to handle extremely long objects such as display cases, frozen food cases, furnaces, air-conditioning units, machine tools, bathtubs, tanks, etc. Skid object on gate leaving one end extending beyond edge of gate. Flush end of object is first swung into body, and then entire object is skidded into body lengthwise.

ANTHONY LIFT GATES FOR 3/4 TON and Larger Trucks and Semi-Trailers



Model No. 144 handles loads up to 1000 lbs. Cuts loading and unloading time 50%.



Model No. 145 handles up to 2000 lbs. on 1 1/2-Ton and larger trucks and semi-trailers.

Model No. 146 handles up to 4000 lbs. on heavy trucks and semi-trailers.

If high freight rates and costly delivery services are cutting a swath out of your profit picture, here are five ways you can offset them.

1. Speed up deliveries.
2. Develop faster, easier ways of loading and unloading trucks.
3. Systematize handling of bulky, awkward, heavy shipments.
4. Prevent damage to goods, yet make it easier and safer for drivers to handle most shipments alone.
5. Help drivers contribute to the satisfaction of the receiver.

All of these advantages are yours when you install Lift Gates on your trucks. We will be glad to recommend the systems, the size and type of Gate best suited for your work.

Write, wire or call us today—no obligation. One of our representatives is nearby. Dept. 5651.



ANTHONY COMPANY
Streator, Illinois

Road Equipment Cost

The companies' third principal cost cutting improvement has involved purchase of more efficient road equipment. They are, for example, putting double-bottom rigs onto a number of runs. Use of "doubles" gives them 20 per cent additional load capacity. Consequently, by using this equipment they have gained one full trip at little additional operating cost with each five trips made. The saving is not immediately apparent but shows up as a substantial improvement at the end of the year.

More savings are in the process of achievement by addition of diesel tractors to PHT hauls. Because of shorter hauls and lower monthly mileage, most PHT equipment has been gasoline engine driven. Now, however, schedules have been worked out that enable the tractors to be operated continuously and at high enough monthly mileages to make diesels pay. A tractor now leaves Seattle with a trailer, which it drops off in Tacoma, where it picks up another fully loaded trailer for Olympia 30 miles away. At that city, it exchanges trailers again, and so on down to Portland, 200 miles south of Seattle. At that terminal, it picks up another trailer for the return trip toward Seattle.

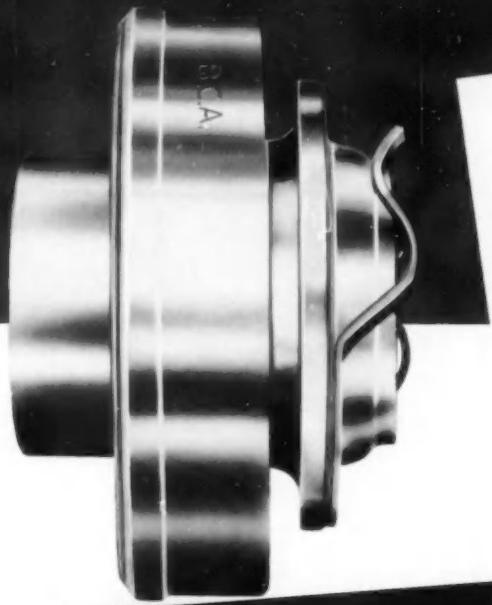
"By scheduling our loads in this manner, PHT diesels run 24 hours a day, thus operating at maximum utilization," says IMF. "We are also able to put the 75,000 miles or more per year onto our diesels that we consider necessary for most economical operation."

END

Please Resume Reading Page 94

BCA CLUTCH BEARINGS

give up to **3 TIMES** "expected" life!



Tests prove it!

Automotive engineers expect clutch bearings to be good for 70,000 to 80,000 declutchings. Tests prove that BCA clutch bearings are good for more than 200,000 declutchings at speeds corresponding to 50 to 60 miles per hour!

Leading fleet superintendents specify BCA bearings. There's good reason why. BCA bearings stand up longer in the clutch!

- BCA clutch bearings are specifically designed for automotive service. They are made to original equipment specifications.
- Precision high-carbon chrome balls, precision-ground carburized steel washers, and unique carrier assembly form a perfectly balanced design that assures correct running and smoother operation at all speeds.
- There's no need for relubrication. The bearing is filled with a highly refined lubricant that remains stable at high temperatures. Ample lubricant space provides a more than adequate reservoir. Lubricant is accurately metered to each bearing.
- Special bronze ferrule minimizes friction and wear on the carrier nose.

Next time, put in BCA "Triple-Life" Clutch Bearings. It pays.

Federal-Mogul Service
(Division of Federal-Mogul-Bower Bearings, Inc.)
DETROIT 13, MICHIGAN



Get the bearings you need WHEN you need them.
Call your Federal-Mogul Service jobber.

BOWER ROLLER BEARINGS

the Louisville "standard" . . .

Proved by tests!

"The Louisville Transit Company operates 400 buses in Louisville and Frankfort, Kentucky. Based upon comparative tests, we decided many years ago to standardize on Bower roller bearings for our fleet. Twelve years of actual service records have proved the high quality of Bower roller bearings, and the fact that we can always rely on the dependable service behind them."

Torrens A. Smith

TORRENS A. SMITH
SUPT. OF EQUIPMENT
LOUISVILLE TRANSIT CO.

FOR THE LAST 12 YEARS



In service like that of Louisville Transit Company, Bower roller bearings prove their outstanding quality and design perfection.

Bower tapered roller bearings are "Spher-O-Honed"—with spherical roll-head and flange surfaces . . . liberal oil groove . . . and durable races honed to micro-inch smoothness. "Spher-O-Honing" means less friction, cooler operation, longer wear.

Bower straight roller bearings have the exclusive "double lip" design which permits them to carry light intermittent thrust loads in addition to supporting radial loads.

Bower journal bearings—designed for small radial loads or where space is limited—are built to the same high standards of precision.

It pays to specify Bower—for the best in roller bearings and bearing service.



Federal-Mogul Service
(Division of Federal-Mogul-Bower Bearings, Inc.)
DETROIT 13, MICHIGAN

Get the bearings you need WHEN you need them. Call your Federal-Mogul Service jobber.

Roads, Taxes and Equipment

Continued from Page 79

put into law. The Senator assured the carriers that every group affected would be given an opportunity to make their objections or voice their approval before hearings have ended.

Representative William H. Ayres, Republican, Ohio, seemed optimistic with regard to the possibilities of getting new roads this year. He saw the possibility of an additional one-cent a gallon tax on fuel, a moderate increase in the tax on oil and tires as a means of financing the program.

He said that additional highway appropriations should be entirely for the interstate system, but, he said, although additional revenue will be forthcoming, the funds will not be earmarked for highways alone. He took the stand that if the government gives more help on the interstate highways, state money will be freed for the other roads.

Leasing

In a panel on truck leasing representatives from the industry discussed various aspects of drive-yourself type service.

John Black, Jr., president of Dixie Drive It Yourself System, outlined some of the advantages of leasing. He mentioned (1) simplified maintenance where the fleet is scattered and decentralized, (2) release of capital for use in the main business where the interests are concentrated, (3) simplification of vehicle procurement and retirement, (4) simplification of cost control, as well as (5) tax advantages.

He pointed out that the question of leasing is an individual matter, requiring study and dependent upon such factors as demands being made on executive personnel, capital requirements of the company and how much automotive "know-how" is provided by qualified truck leasing companies.

C. A. Higgins, Jr., vice-president of Avis Rent-A-Car, said that insofar as few businesses have a stabilized type of truck delivery operation throughout the year, leasing offers advantages in taking

care of seasonal peaks. Leased trucks are available as replacements and additional units, he said, and thus eliminate the necessity of carrying extra vehicles.

Another point he mentioned concerned the try-out of equipment by the company prior to purchasing it.

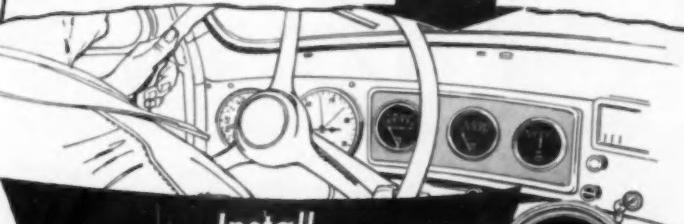
He suggested that fleetmen use rented trucks to determine what type, make, size, and body style best suits their requirements so that they would be in a better position to select new equipment if and when they decide to purchase outright.

Vehicles and Equipment

The familiar panel "Manufacturer Meets the Consumer" high-

(TURN TO NEXT PAGE, PLEASE)

ACCURACY HERE... Can Save Costly Engine Damage!



Install
STEWART-WARNER
Universal Mounting
GAUGES

for trucks, buses and cars

The complete line of Stewart-Warner instruments offers a wide range of ammeters—every instrument you need for any automotive purpose. Every one of them is built to famous Stewart-Warner standards of accuracy—to give dependable warning indications before oil drains away, before coolant boils off or fuel runs out . . . before countless other engine troubles cause costly damage.

Look for the quality gauges on display at your Stewart-Warner jobber. Stewart-Warner replacement gauges are heavy-duty, with chrome bezels and rust-proofed steel cases. All mount through the front of the panel and have individual mounting brackets. Pressure and temperature warning switches for visible or audible signal also available. See your Stewart-Warner jobber today.



Water Temperature Gauges



Oil Gauge



Ammeter



STEWART-WARNER

Dept. DD-36, 1840 Diversey Parkway, Chicago 14, Ill.

Roads, Taxes, Equipment

Continued from Page 155

lighted the session as far as the maintenance man was concerned. A team of six fleetmen tossed questions to the team representing vehicle and equipment makers—and they got the answers. They wanted to know about automatic transmissions, power steering, power brakes, the new tubeless

tires and something about developments in rims and wheels. Here are just a few of the revelations:

GMC Truck and Coach Div. has a total of 46,942 automatic transmissions in trucks in the field to date. One out of every three of GMC's light trucks is equipped with automatic; one out of five medium duty is so equipped; and in the heavy-duty field one out of seven is now being sold with an

automatic transmission. According to Frank Campagnoni of GMC fuel economy is equal to that of vehicles equipped with "sticks"; engine life is increased; roadability under icy conditions is better; original cost is higher.

There have been four million power steering units sold on passenger cars since 1951, according to R. R. Noble, Chrysler Corp. It offers definite advantages in passenger cars; it can offer the same advantages to trucks. He mentioned increased safety, reduced driver fatigue especially with cross winds and on highly crowned roads, improved roadability. He said that with increased loading of front ends, power steering has already progressed from a luxury item to a requirement for certain types of operations. He predicted that power brakes, which have become so popular with passenger cars, will become standard equipment on trucks within a very short period of time.

Paul Hykes of the Budd Co. reviewed developments in rims for tubeless tires. He said that while aluminum wheels were not as yet ready for the trade, there is a strong possibility that they will be in the near future. Disc wheel mounts, he said, have now been standardized so that they are interchangeable between truck makes.

W. H. Elliott, of B. F. Goodrich, described developments in tubeless tires. He cautioned against damaging of the tubeless tire in mounting and dismounting, stating that this is where most of present day troubles are originating. He recommended the use of automatic mounting machines to avert this possibility. He said that ratings for the tubeless tires had been upped to a more realistic figure. Thus, present tires with more practical ratings must not be overloaded since the margin has been reduced. Elliott stated that recapping experience indicates satisfaction. Fleet experience to date shows that mileages are greater with tubeless tires, possibly due to cooler operating temperatures and improved resistance to tread cracking.

END

Please Resume Reading Page 80

BIG OPERATOR OPERATES!

SPECIFY MICHIGAN HI THERM

Made to the same original equipment specifications as the bearings we supply to leading car and truck manufacturers.

DETROIT ALUMINUM & BRASS CORPORATION

DETROIT 11, MICHIGAN

Big, middle-sized, and small-scale truck operators can really operate on Michigan Hi Therm Engine Bearings. More earning power with more road time. Easier faster replacement with original equipment quality and accuracy.

there
are
at
least

19

factors contributing to oil contamination

. . . continuously causing oil contamination build-up during normal operation . . . including

PISTON RINGS . . . CARBURETOR . . . DISTRIBUTOR . . .
SPARK PLUGS . . . AIR CLEANER . . . BREATHER CAP . . .
RADIATOR . . . TIMING GEAR . . . WIRING . . . BATTERY
. . . AND MANY OTHERS

To fully protect an engine, an oil filter must be designed to remove all contaminants from the oil, especially water, the chief cause of sludge and source of corrosive acids.

The Walker Replacement Oil Filter Cartridge provides complete protection because THE WALKER CARTRIDGE IS ABLE TO ABSORB AND HOLD THE WATER OUT OF OIL.

....this special water absorbing ability helps protect engines against damage from permanent anti-freeze seepage.



These two examples illustrate this contamination process which is taking place all through the life of the engine:



SPARK PLUGS — normal wear causes change of spark gap, which impairs combustion efficiency. Faulty combustion means increased oil contamination from the blow-by of water and other combustion by-products.

WALKER Cartridges give complete protection throughout entire engine life.



PISTON RINGS — normal wear and carbon deposits impair the rings' ability to form a seal with the cylinder wall. This means increasing "blow-by" of water and other combustion by-products which must be removed from the oil. WALKER Cartridges give complete protection throughout entire engine life.



This free illustrated book tells the factual story of oil contamination build-up and oil filtration problems. Mail your request, on your company letterhead, to . . .

"Fishy-Back" Ready for Launching

Continued from Page 77

eventually serve Boston, New York, Philadelphia, Baltimore, Charleston, Jacksonville, Miami, Tampa, Mobile, New Orleans, Houston, and Galveston. Pan-Atlantic is also seeking rights to serve other Atlantic and Gulf ports.

Pan-Atlantic is a subsidiary of McLean Industries, Inc., Mobile, Ala. Head of the parent company is Malcolm P. McLean, who resigned as president and withdrew his interest from McLean Trucking Co. in January, 1955, when this became necessary in order for him

to carry out his plan of operating a coastal trailership service. For Mr. McLean, the actual start of the trailership service will top off a series of complex and at times stormy developments extending back to early 1954 when his original plans for a trailership service were first announced.

Other Operations

The Pan-Atlantic service is of major importance because it is the first "fishy-back" operation offering direct competition to all other forms of land transportation within the states. It is, however, by no means the first operation to handle seagoing trailers. Most directly comparable with the Houston-New York service is the Ocean Van Line operation (CCJ Oct. '52, page 66) which moves trailer bodies on ships between Seattle-Tacoma and Alaska.

There are now a number of other shipping operations in the United States based on roll-on, roll-off or lift-on, lift-off principles. Most of these operations carry freight cars, trailers or container units for relatively short distances on inland or protected coastal waterways such as the Great Lakes, Puget Sound, and the Hudson River. One off-shore service, operated by Suwanee Train Ferry Lines, uses two converted LSD's which carry 23 freight cars each on trips between Fort Lauderdale, Fla., and Havana, Cuba.

Freight cars are also moved in deep-water coastal trade by Seastrain Lines, Inc. between ports on the Atlantic and Gulf coasts. Seastrain vessels can accommodate 100 freight cars which are loaded and unloaded by fixed shore cranes.

Trailer Ships

TMT Trailer Ferry Inc., New York, moves trailers on ships in a roll-on, roll-off operation between ports in the Southeastern United States and the Caribbean, mostly Puerto Rico, using converted wartime landing craft. The company last year purchased a new ship, now nearing completion, which will be capable of car-

(TURN TO PAGE 162, PLEASE)

TRUCK BODY
HARDWARE

The BIG DIFFERENCE Between a
Truck and a "TRUCK!"

A truck is not a TRUCK if its body can't "stand the gaff" along with the engine and chassis.

The best truck bodies built today are designed and made to stand the abuses of long service with maximum usage. That's why the large majority of body builders prefer Eberhard (E) Purpose Tested Hardware for the "Long Run."

Write for the
NEW CATALOG No. 15

Investigate these
"LONG RUN"
Items

HINGES • LATCHES • DOOR IRONS • DOOR CONTROLS • SEAT IRONS • LOCK HANDLES • SEAT PEDESTALS • REFRIGERATOR LOCKS • PANEL DOOR LOCKS • VAN BODY LOCKS • SLIDING DOOR LOCKS • LADDER HOLDERS, ETC.



EBERHARD MANUFACTURING COMPANY
EVARTS AVE. • CLEVELAND 4, OHIO
Division of the Eastern Malleable Iron Company

LONGRUN

TRUCK BODY
HARDWARE BY
EBERHARD

THE MOST COMPLETE LINE AVAILABLE

EBERHARD MANUFACTURING COMPANY
Division of the Eastern Malleable Iron Company

HERE'S POSITIVE PROOF IT'S PERFORMANCE THAT COUNTS!



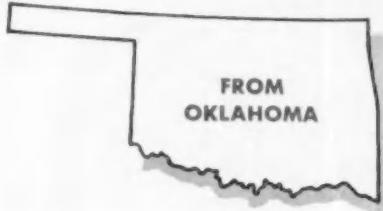
"With Philgas our engines cost less to operate, need less maintenance, last the life of the trucks."



"We're sold on Philgas because there's no contamination. We lowered fuel and maintenance costs all the way around."



"Tested Philgas in trucks in constant operation six days a week. It proved valuable to us beyond a doubt."



"We've got 10 trucks using Philgas, all over 200,000 miles and not even a top overhaul yet."



"We save two ways with Philgas. Fuel costs are lower—maintenance is less."

Philgas® is an efficient, economical fuel. A look at the records of fleets of trucks, cabs and buses will show you why so many operators are converting their entire fleets to Philgas . . . or buying replacements already factory-equipped to use this power-packed, clean-burning fuel. Find out how you can benefit from Philgas. Write for complete information.



Philgas is our name for high quality LP-Gas—Bottled Gas—Butane—Propane.

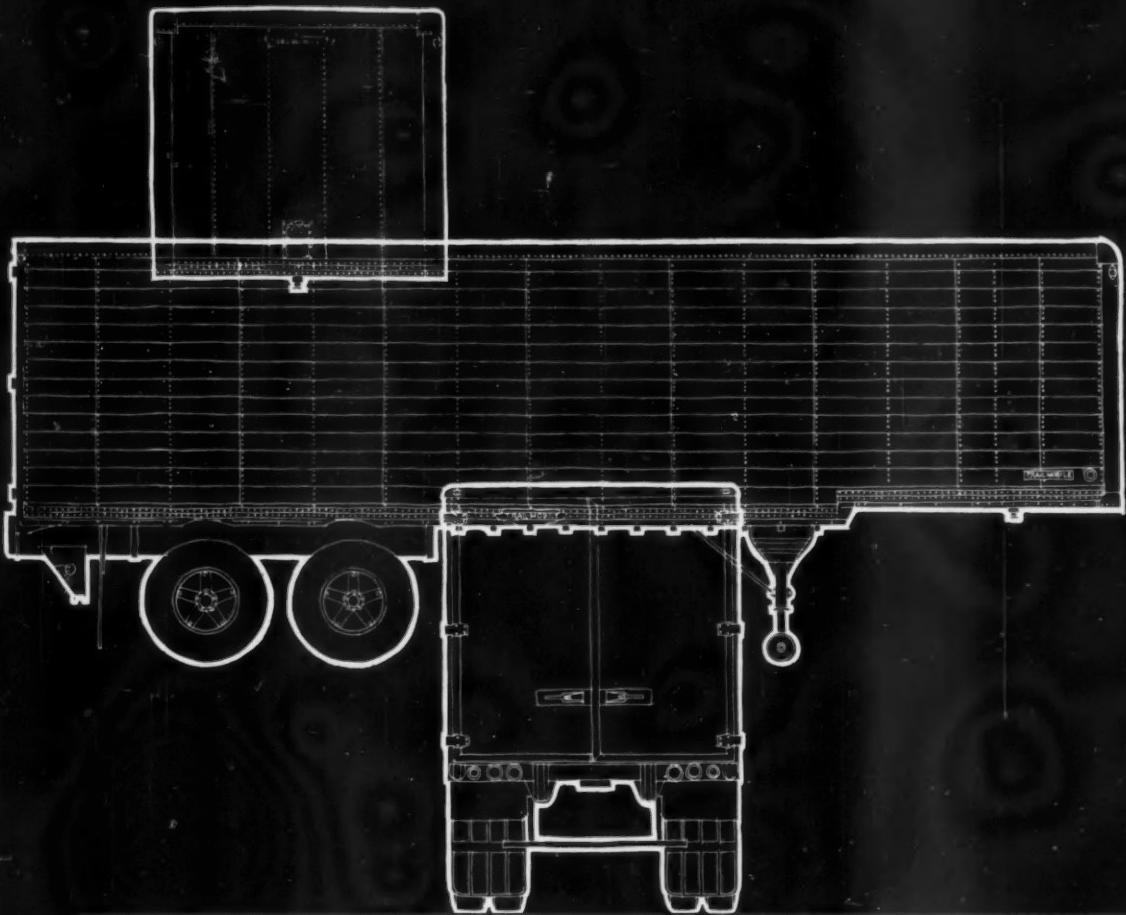
PHILLIPS PETROLEUM COMPANY SALES DEPARTMENT, Bartlesville, Oklahoma

Offices Int'l

AMARILLO, TEX.—First Nat'l Bank Bldg.
ATLANTA, GA.—1428 West Peachtree Street
CHICAGO, ILL.—7 South Dearborn St.
DENVER, COLO.—1375 Kearney Ave.
DES MOINES, IOWA—606 Hubbell Bldg.

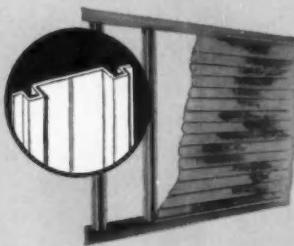
HOUSTON, TEX.—1020 E. Holcombe Blvd.
INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South
NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—WOW Building

RALEIGH, N. C.—804 St. Mary's Ave.
SALT LAKE CITY, UTAH—68 South Main
ST. LOUIS, MO.—4251 Lindell Blvd.
TAMPA, FLA.—1214 South Dale Mabry
TULSA, OKLA.—1708 Utica Square
WICHITA, KAN.—501 KFH Building

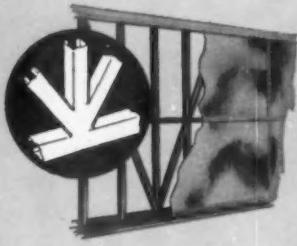


CID alone gives you this wide

Considerations of cube, weight, strength or streamlining will make one side panel far more desirable for *your* operation than any other. And with CID you have a choice. And that's not all. CID lets you select from an equally wide range of underframes, floors, linings, fronts, nose caps and running gear. In short, you simply design the trailer yourself.



Optimum Cube side panel gives maximum inside width combined with lightweight, good streamlining and a trim, modern appearance.



Smooth side panel with truss sidewall construction provides for long life under rugged highway conditions. In aluminum or steel at low initial cost.

ONLY CUSTOM DESIGN will meet your exact hauling need

...and only Trailmobile's CID* gives you custom design

It's as simple as this: Under today's competitive conditions your trailers need to deliver maximum revenue on every haul. And that means trailers that exactly fit your hauling needs!

That's why thousands of cost-conscious operators are turning to Trailmobile's CID (Customer Individualized Design).

CID is a new concept of trailer design that combines the advantages of custom engineering with all-important interchangeability of parts. CID frees you completely from the costly limitations of *mass produced models* because CID gives you the choice . . . lets you select from a wide range of standardized components to produce the trailer that meets *your* hauling needs exactly!

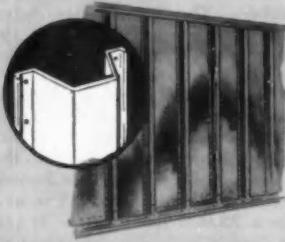
So don't be tempted by offers of immediate delivery on *mass produced models*. Get what *you* need! Get CID!

TR-422

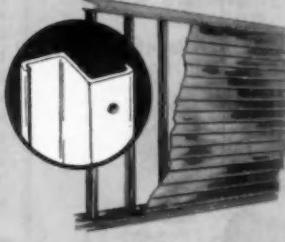
TRAILMOBILE INC.

Cincinnati 9, Ohio • Berkeley 10, California

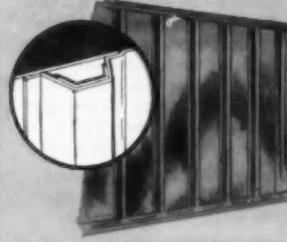
choice in side panels!



Exposed post side gives good exterior protection, sturdy sidewall strength, practical inside width. Ideal for cramped, hazardous loading areas.



Horizontal corrugated side panel gives practical inside cube combined with sturdy, stressed-skin construction and excellent appearance.



Integral Post side panel offers unusual strength and rugged exterior protection at the lowest initial cost. Every post an integral box.

*Customer Individualized Design

"Fishy-Back"

Continued from Page 158

rying up to 100 trailers and 100 automobiles, 500 tons of bulk cargo and 12 passengers. The vessel is scheduled to begin operation between Canaveral, Fla., and San Juan, Puerto Rico in June.

Speaking at the recent Truck Trailer Manufacturers Assn. con-

vention, TMT's president Eric Rath said his company may eventually operate as many as 14 ships which would move 200 trailers per day to and from Caribbean ports.

Proposed Services

There is a good deal of interest among shipping concerns in the roll-on, roll-off type of trailership service. A recent report issued by the Maritime Administration

listed eight "apparently firm" proposals for equipment to be used in this type of operation. Some 39 ships are involved in these projects.

Among the proposals:

Alaska Trainships Inc., a subsidiary of Alaska Steamship Co. proposed to build and operate two ships for use between Seattle and Whittier, Alaska. Each ship would be designed to carry 40 loaded truck trailers, 110 rail cars, and 12,000 barrels of oil products. Estimated cost of each vessel is \$9 millions.

American-Hawaiian Steamship Co. has a plan for 10 big, fast vessels, each designed to carry 570 loaded trailers between New York

(TURN TO PAGE 164, PLEASE)

GROTELITE "70" REFLECTOR FLARE *gives MAXIMUM emergency warning!*

Grotelite "70" unfolds instantly, automatically locks into upright position. In seconds, it's protecting your truck front and rear from onrushing traffic. Flare digs in, stands firmly even in 50-mile wind. Brilliant Grotelite shatter proof reflectors alert and warn at the greatest possible distance . . . provide two-way protection. Exceed all S. A. E. and I. C. C. requirements for truck and bus emergency warning signals.

Check your specific needs with the complete Grote line of truck safety equipment. See your Jobber today . . . or write for information.



Distributed throughout the U.S. and Canada
THE GROTE MANUFACTURING CO., INC., Bellevue, Ky. • Opposite Cincinnati

Be Safety-Sure with GROTELITE Weather-Proof STOP & TAIL LAMPS

Model No. 215
Features 3 1/2" dia. plastic prismatic lens with metal rim door. Plug type, stud mounting.



Over 20 models available to fit all stop and tail lamp applications.

Model No. U-218
Features one-piece plastic prismatic lens and door. Plug type, universal mounting.

Known as the Truck-A-Bin, Fruehauf Trailer Co. has started production on a bulk flour handling trailer particularly suited for small and medium-sized bakers. The Truck-A-Bin, being insulated, will not only transport the bulk flour but is also capable of storing the flour outside for several days without damage. Typical method of handling is the transfer of flour from flour mill or railroad bulk flour car equipped with an Airslide unit into the Truck-A-Bin from where it is hauled by a tractor to the customer. The new unit has a 25,000 lb capacity. It can be bulk loaded with the equivalent of 250 sacks in an hour. It has the advantage of being completely sanitary as no human contact is made with the flour. Thorough cleaning is possible by means of large clean out panels. Along the bottom of the Truck-A-Bin are two screw conveyors which carry the flour along to the outlets at the back of the unit. Flour is removed then through a pneumatic or mechanical conveyor to tote or mixing bins.

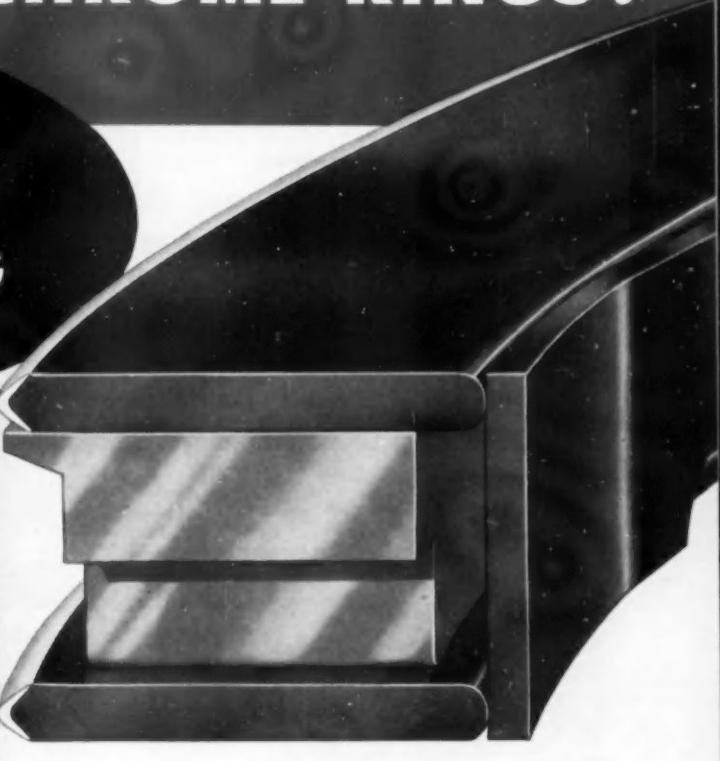
SEATS 3 TO 4 TIMES FASTER THAN OTHER CHROME RINGS!

HASTINGS *Beveled* 2-C OIL RING

Note beveled shape
of steel sections

See how Hastings beveled rail offers extra chrome on oil-wiping surfaces. Even as ring wears, solid chrome meets the cylinder wall.

"Fineline" wall contact
assures fast seating



See the Difference!

BEVELED CHROME RAIL—Makes fineline contact with cylinder wall... less area to wear-in—less time to break-in! Another Hastings first.

CONVENTIONAL CHROME RAIL—Originally developed by Hastings... now replaced by fast-seating Beveled Chrome, which only Hastings has.

Another Hastings *first!* Beveled Chrome-Vent Piston Rings that seat 3 to 4 times faster than ordinary chrome!

Here's a ring set with a revolutionary type oil ring. The rails are beveled chrome—a patented* feature that assures positive, fineline contact with any cylinder wall—tapered, out-of-round, or re-bored.

Oil control starts right now. And because the beveled design permits using a lighter inner-spring, you always get soft pressure that's gentle on cylinder walls.

With Hastings torsional design, high-graphitic compression ring in the same "Motor Engineered" set, Beveled Chrome-Vents give you the fastest seating, best performing chrome combination there is!

Next ring job, install the *only* chrome rings that are beveled to seat fast, and stop oil-pumping from the start. Install Hastings Beveled Chrome-Vents—made by replacement specialists!

*PATENT NOS. 2148997, 2511874, 2565042, 2712971

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN • HASTINGS LTD., TORONTO
Piston Rings, Casite, Wear Reducer, Oil Filters, Spark Plugs



HASTINGS

Tough on oil-pumping... Gentle on cylinder walls

Beveled Chrome-Vent
PISTON RINGS
for Heavy Duty Service

"Fishy-Back"

Continued from Page 162

City and Los Angeles, San Francisco and Seattle. Total cost of the vessels is estimated at \$115 millions.

Pan-Atlantic also has a plan for seven roll-on, roll-off ships as described previously.

American Liberty Steamship

Corp. has proposed a plan using three ships to be operated between Northeastern ports and Galveston-Houston, Tex., and carrying rail cars.

TMT Trailer Ferry Inc. already has a roll-on type vessel scheduled for service in June.

Puerto Rico Railroad & Transport Co. has a plan for "two large truck trailer ships for operation between New York and Puerto Rico."

Trainships, Inc. proposes two ships to carry freight cars between north Atlantic ports and Texas, and Transportation Utilities, Inc., has proposed construction of two trainships to be chartered to the Erie and St. Lawrence Corp. for operation between New York and Jacksonville, Fla.

Military Service

Trailerships have attracted the attention of the Department of Defense as well as civilian ship operators. The Maritime Administration has placed a \$10 million contract for a roll-on, roll-off type unit for the Military Sea Transportation Service. In addition, there is now a program aimed at making extensive use of standardized containers for military goods.

Main reason for the interest by both civilians and the military in the trailership principle, is that the increased speed of loading and unloading trailerships results in significant savings compared with the usual method of handling cargo at the docks. Cost of cargo handling with present methods has been shown to be the largest item of operating cost for shipping concerns, amounting in some cases to as much as 50 per cent or more of total freight revenues.

Advantages

While there are no figures based on actual experience for roll-on, roll-off ships, the Seatrain service with its lift-on operation reported cargo handling costs of only 2.7 per cent of each freight revenue dollar in 1953. Other advantages of the trailership service to shippers include minimized requirements for special packaging, lessened chances for pilferage of shipments and fewer delivery and interchange delays which have made water transportation inconvenient for many shippers.

In view of the interest in the trailership idea on the part of ship operators and government agencies, it seems likely that within the next few years Operation "fishy-back" should be in a healthy condition.

END

Please Resume Reading Page 78

COMMERCIAL CAR JOURNAL, March, 1956

POWER TAKE-OFFS

UNIVERSAL JOINTS

for ALL types of TRUCK EQUIPMENT



POWER TAKE-OFF — Series "P". Single gear — single speed.

Make Installations EASIER with these products:

HANGER BEARINGS

Completely adjustable brackets—all popular bore sizes—sturdy.

SHAFTING WITH KEYWAYS

Keys fitted— $\frac{3}{8}$ to $1\frac{1}{4}$ round — square and hex — any length.

PROMPT SERVICE

Immediate shipment to distributors from large, complete inventory

ALL TYPES of high quality units . . . to meet any engineering demand.

POWER TAKE-OFFS . . . light, medium and heavy duty models. In single or multiple speeds, with single and dual shafts. Also hydraulic pump PTO.

UNIVERSAL JOINTS . . . four types, light to heavy duty. Regular and slip lengths — also tubular assemblies. Round, square, and hex bores.

Write Us For The Name Of Your Nearest Distributor



UNIVERSAL JOINT — end yoke type. Needle bearing (200 series) — standard length.

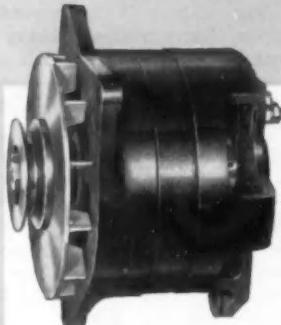
MUNCIE

MUNCIE PARTS MFG. CO.
2601 S. JEFFERSON
MUNCIE, INDIANA, U. S. A.

OTHER PRODUCTS: HYDRAULIC PUMPS • MOTORS • VALVES • CYLINDERS

Leece-Neville

12 VOLT ALTERNATORS FOR YOUR '56 FLEET



**L-N
Standard
Alternator**

This is the 12 volt version of the latest L-N Alternator, that actually costs less than "extra" output d.c. generators. Typical Leece-Neville quality. Output: 50 amps at 12 volts (equal to 100 amps at 6 volts).

A RIGHT SIZE L-N ALTERNATOR FOR EVERY NEED

For 6 volt systems capacities range from 55 amps to 95 amps. Alternators from 30 to 180 amps are available for 12 volt systems. Also for 24 and 32 volt vehicles. L-N Alternators weigh much less than comparable d.c. generators.

**YOU CAN
RELY ON**

Leece-Neville

ALTERNATOR SYSTEMS



D C GENERATORS



CRANKING MOTORS



REGULATORS



SWITCHES

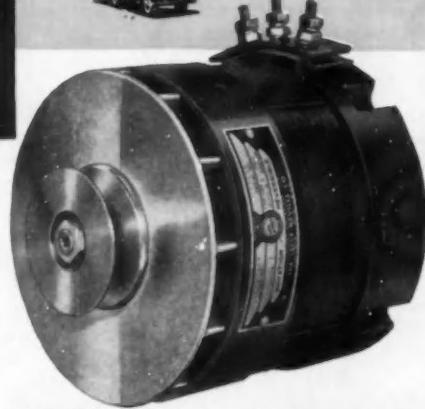


SMALL MOTORS



Automotive Electric Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY



L-N Heavy-Duty Alternator

This 12 volt L-N Alternator is mechanically the same as the familiar Type 5058, the 6 volt, 95 ampere L-N Alternator that has been proved on thousands of cars and trucks since 1946. It delivers up to 60 amps at 12 volts. L-N Transformer can be attached to give up to 800 watts of 110 volt portable power.

EITHER the Standard or Heavy-Duty Alternator will give your '56 fleet all the famous advantages of the Leece-Neville a.c.-d.c. generating system, including: 1 - Always a charged battery 2 - Constant voltage for longer life of electrical units 3 - Unequalled reliability and freedom from breakdown. Be sure to specify Leece-Neville on your '56 fleet.

There are many more advantages to Leece-Neville Alternators. If your present fleet is not Leece-Neville equipped, send for all the facts and name of your L-N Distributor. Write The Leece-Neville Company, Cleveland 3, Ohio. Distributors in principal cities . . . Service Stations everywhere.

Torque Converter Fluid, Type A or C?

By Joseph Geschelin
Detroit Technical Editor

OUR ATTENTION has been drawn to some misunderstanding regarding the hydraulic fluids used in automatic transmissions employing torque converters. The fluid recognized by the SAE as Type A is used across the board in all passenger car automatic transmissions as well as such transmissions used in light trucks. Ac-

cording to best authorities in this field, no move has been made to displace Type A materials for this purpose, although some feel that the retail price is high and something should be done to get it lower.

Basic cause of misunderstanding about these fluids stems from the fact that Allison has found it desirable to

use an entirely different and lower priced lubricant for its heavy duty torque converter drives employed in large off-highway vehicles and on large trucks. For this purpose, Allison has developed a specification designated as Type C (not an SAE standard). It is based upon the use of a mineral oil with viscosity in the SAE 30 range compounded with certain additives to resist high pressures and high temperature effects without corrosion. Hence it is not a straight mineral oil as some have characterized it. The specification is satisfied by some lubes produced by certain refiners—not all. And it is satisfied by some formulations of Mil 2104-B type—not all.

Where Type C Fits

Type C lube is recommended by Allison for extremely heavy duty earthmoving equipment such as employed in mining operations; on some coaches where heavy duty is encountered; and on some heavy duty truck applications. It represents a considerable cost saving as well as other advantages in these applications.

It is recognized that Type C lubes may be required on some heavy duty applications where operating conditions are not met by Type A. In this event, the choice lies with the operator. We are given to understand that Type A lubes are used exclusively in experimental work and testing at the Detroit Transmission Div., where Hydra-Matic drives are produced.

SAE Standard

Incidentally, Allison is the only organization thus far to recommend the so-called Type C lubes.

In summary, therefore, it appears obvious that SAE Type A is the universal material for automatic drives among passenger car manufacturers and remains the SAE standard at this writing.



COATS TRUCK TIREMAN

The first and finest tubeless truck tire changer in the field. It's as simple to operate as the Coats Tireman designed for tubeless passenger car tires.

SPECIALISTS IN TUBELESS TIRE SERVICE AND REPAIR EQUIPMENT

Check These Important Features

- * Handles both tubeless and conventional truck tires.
- * Works with open or Budd-type wheels.
- * Makes truck-tire changing a one-man operation.
- * Precision-built of the finest materials.
- * Incorporates same roll-on, roll-off principle used so successfully on the Coat passenger car Tireman.

JACK P. HENNESSY COMPANY, INC.

WESTERN DIVISION OFFICES
3463 Cahuenga Boulevard
Los Angeles 28, California
PIONEERS IN
TUBELESS TIRE SERVICE EQUIPMENT

MANUFACTURED BY COATS COMPANY, FORT DODGE, IOWA

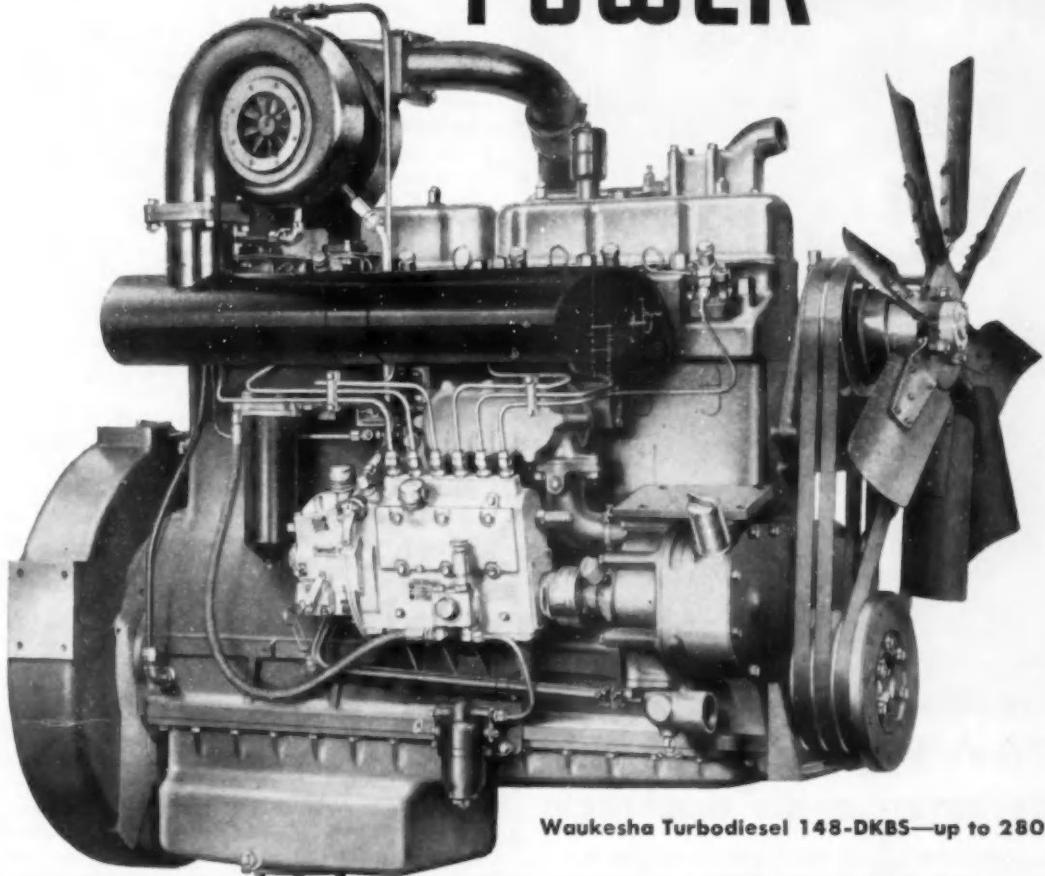
GENERAL OFFICES
12 Depot Square • Englewood, N. J.
MID-WEST DIVISION
244 E. Pearson St. • Chicago, Ill.

Catty Cora: "I think Frank and Mabel were the cutest couple on the floor last night."

Safety Sadie: "Oh, were you at the dance last night?"

Catty Cora: "No. I went to a house party."

MORE POWER TO YOU!



Waukesha Turbodiesel 148-DKBS—up to 280 hp

WAUKESHA *Diesels*

Compact, and power-packed—Waukesha 148-DKBS is a 6-cyl., 779 cu. in. Supercharged Diesel that has lively acceleration, clean burning, prompt starting, a tremendous reserve of power, and great overall economy. Waukesha's exhaust turbocharger system greatly increases horsepower—from 200 hp (of the normally aspirated 148-DKB) up to 280 hp at 2100 rpm in this Turbodiesel model. Send for Bulletin 1647.

WAUKESHA MOTOR COMPANY
Waukesha Wisconsin
New York • Tulsa • Los Angeles



Fleetman's Library

Continued from Page 88

To a fleet maintenance chief
who has to "keep 'em rolling"!



Here's Hygrade's pump with the "never-say-die" diaphragm

Nobody has to tell you that it's the diaphragm that makes or breaks a fuel pump. You've seen too many perfectly good pumps fold up after only a few thousand miles because the diaphragm "went".

Here's HYGRADE's solution — the one-piece, non-corrosive *Monoflex* diaphragm that *lasts for the life of the pump*. And it's not just the rugged material in it that makes *Monoflex* the longest-lived diaphragm on the market—it's also the way it's fitted. The diaphragm is so tightly sandwiched between the smooth casting surfaces that not even the smell of gas can escape.

Its great diaphragm isn't the only reason for this HYGRADE fuel pump's popularity with fleet men. For instance, the rocker arm is heat-treated for extra strength and minimized wear. And its valve springs are phosphor bronze, oil-treated, remain perfectly elastic.

Write our engineering department for complete details. That's HYGRADE PRODUCTS DIVISION, Standard Motor Products, Inc., 37-18 Northern Boulevard, Long Island City 1, New York

HYGRADE



Carburetor Kits • Fuel Pumps & Kits • Speedometer Cables & Casings

Hose and fittings for low, medium and high pressure service are covered in this new catalog from Aeroquip Corp. There are separate sections on special fittings and self-sealing couplings. Circle L 7 on the postcard on page 84 to get your copy.

Self-tapping inserts to provide a firm base for threaded fastenings in non-ferrous metals and plastics are described in this catalog from Groov-Pin Corp. Circle L 8 for your free copy.

Bus Facts, 1955, is the 24th edition of this annual statistical and operational summary of the intercity bus industry. Copies are available from National Assn. of Motor Bus Operators, 839 17th St., N.W., Washington 6, D. C.

Automatic transmission tool catalog has just been published by New Britain Machine Co. For your free copy, circle L 9 on the postcard on page 84.

Carbon dioxide systems for inert gas welding available from Pure Carbonic Co. are described in this folder you can get by circling L 10 on the postcard.

Accident prevention manual published by National Safety Council is 1341-page encyclopedia on safety. It sells for \$13.50. Further information may be had from National Safety Council, 425 North Michigan Ave., Chicago 11, Ill.

Solvent detergents for removing carbon, grease, dirt and paint in automotive service made by Oakite Products, Inc., are described in this new folder. Circle L 11 on the postcard on page 84 for your free copy.

Lathes, drill presses, shapers and pedestal grinders are covered in South Bend Lathe's 50th anniversary catalog. Circle L 12 for your free copy.

Plastic diagrammer for accident reports and safety bulletins has stencil cut-outs for various vehicles, road intersections, traffic signs, etc. Safety men can order them from A. Lawrence Karp, 16 Putnam Park, Greenwich, Conn., at \$2.00 each.

Lift gates with 1100-lb capacity for $\frac{1}{2}$ to 1-ton trucks made by Hercules Steel Products Co. are described in a new folder you can get by circling L 13 on the postcard on page 84.

Torque washers and "kwik" nuts for body work are briefly described in a bulletin from Frank L. Robinson Co. Circle L 14 for your free copy.

Parking manual covers in 55 pages the urban parking problem—what it costs, how it can be alleviated. For further information, write Automotive Safety Foundation, 200 Ring Bldg., Washington 6, D. C.

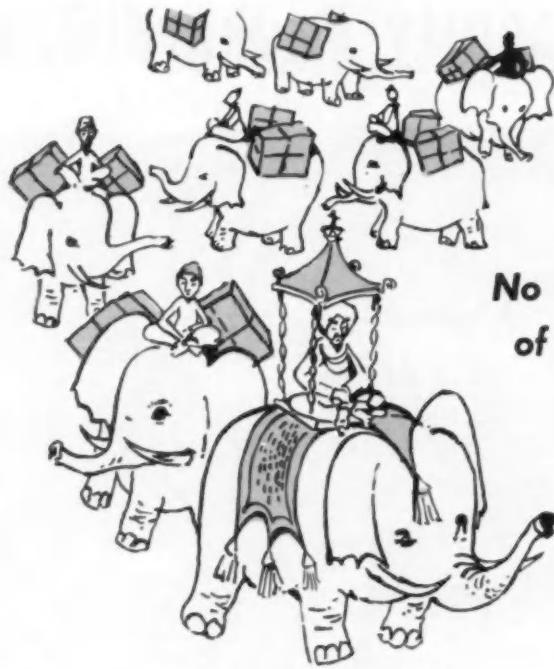
Six-wheel trucks and tractors made by International Harvester Co. with 22,000 to 60,000 lb GVW and 35,000 to 65,000 lb GCW ratings are described in this new catalog you can get by circling L 15 on the postcard on page 84.

Adhesives, sealers and coatings made by Minnesota Mining & Mfg. Co. are covered in this booklet. It gives the use characteristics of over 75 compounds in quickly-read chart form. Circle L 16 on the postcard for a copy.

Trailer body booklet tells what The Budd Co. does in the making of stainless steel trailer bodies. Circle L 17 for a copy.

END

Please Resume Reading Page 90



**No matter what kind
of fleet you operate...**

PEDRICK Formflex Chrome Rings

with the Exclusive "Equalizer"

**will reduce your down-time...
operating costs...maintenance costs**

Efficient, cost-conscious fleet operators have discovered that one proven way to save money is to standardize on PEDRICK Formflex Chrome Rings. The secret is the exclusive "Equalizer" in every Pedrick set. It provides soft but positive and uniform pressure all around the cylinder wall. The result is a more perfect seal which automatically means high compression, lower fuel and oil consumption and better all around performance from every vehicle on the road. You can cut your costs down to the bone . . . reduce your down-time to a minimum, by standardizing on PEDRICK Formflex Chrome Rings.



DEPEND ON

Pedrick

FOR TOP PERFORMANCE

**WILKENING MANUFACTURING CO., Philadelphia 42, Pa.
IN CANADA : Wilkening Manufacturing Co. (Canada), Ltd., Toronto**

Play it safe! Specify Packard Cable



*Original equipment on
more vehicles than any other brand—
that's your proof
of dependability!*

			
CABLE FOR REAR-ENGINE BUSES —Packard development made with special insulation to withstand heat, oil, steam and cleaning compounds, other deteriorating conditions.	"404" LOW TENSION CABLE —Stranded copper conductor covered with tough coat of Packard "404" plastic. Small diameter, highly flexible and wear-resistant.	"440" IGNITION CABLE —Long the leader, this high tension cable continues to be used on more vehicles than any other except those using Packard TVRS.	BATTERY CABLES —Deliver full starting power, extra flexibility with strength. Additional features make replacement easier, deliver top electrical performance.

for all automotive wiring jobs!



Lowest Replacement Cost Per Thousand Miles, Too!

Yes, you win at every turn. Packard Cable is longer lasting because special insulating compounds have been specifically developed for automotive service by Packard engineers. And, because it does the job best, more Packard Cable is used than all other



TELEVISION-RADIO SUPPRESSOR CABLE!

Another Packard first! TVRS Cable is made with a special high-tension, non-metallic conductor that provides the ultimate in cutting out electrical interference caused by ignition systems. Its tough exterior stands up against deteriorating conditions found on the job. Supplied in kits and factory-made sets, complete with terminal attachments.

brands combined. This results in mass-production economies that make possible extra quality at no extra cost.

So why not play it safe? There's a Packard Cable made to meet your every replacement requirement, and you can get them all from a single source. That's your Packard Jobber. Call him today for fast action. His entire line is packaged for your convenience.

FOREMOST BUILDER OF
AUTOMOTIVE WIRING

Packard
REG. U.S. PAT. OFF.
MADE IN U.S.A.

Packard Electric Division, General Motors, Warren, Ohio



A GENERAL MOTORS PRODUCT — A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE

New Product Descriptions

Continued from Page 86

vided. These three cartridges are designed specifically to service Wix filters WF-750 and WF-750-C, as well as Luberfiner filters 750, 1500 and 2250. The Wix sock-type cartridge CW-750 and can-type CW-750-M contain "Wixite," the depth-type filtrant featuring the resilient density

of highly absorbent white cotton yarn blended with specially treated, springy wood fibres to prevent matting and channeling. The can-type CW-750-MS cartridge contains an engineered filtrant consisting of paper and wood flock and a resinous bonding agent, heat treated at controlled

temperatures to provide high filtering efficiency and flow rate as well as long life in heavy duty service.

P24. Flasher Light

Gen-A-Matic Corp., Van Nuys, Cal., is introducing a new 2-way flasher light. Approximately 7x5x8 in. in size, the flasher light uses a new neon tube said to offer greater visibility and a non-fading, shatterproof Stimsonite optical lucite lens for maximum intensity of the beam. The neon tube is shock-mounted in a two-way directional head that rotates easily to any desired position. Battery operated, the flasher has only one moving part poised on a bearing that is an enlarged replica of the watch-type bearing.

P25. Lube Hose Reels

Alemite Division, Stewart-Warner Corp., Chicago, has introduced a new line of overhead lubrication hose reels. Reel slides in and out of the case on a built-in track where it is accessible for repair. New units, with each reel interchangeable for either high or low pressure use, can be added to the "bank" at any time. Delivery hose locks at desired length, releases at a slight pull on the hose. Eight

(TURN TO PAGE 174, PLEASE)



DOLE DV THERMOSTATS

help restore smooth engine performance

Thermostats are small items—but don't overlook them. Check the thermostat on every motor tune-up job. Then replace with a new Dole Thermostat. Your customer will thank you for the improved motor performance. He'll be more likely to call again.

Replacement thermostats have a big market . . . millions of them every year. Be sure to get your share . . . and be sure you feature

Dole Thermostats . . . "tops" in quality and performance for 30 years.

protect your good name with another

Control with Dole

DOLE

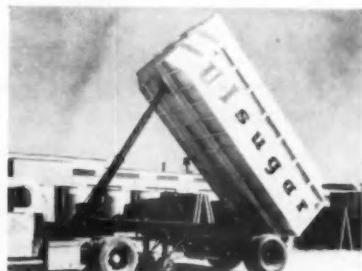
THE DOLE VALVE COMPANY

1901 Carroll Ave., Chicago 12, Ill.

Representatives in Principal Cities

Now Nationally Advertised in the SATURDAY EVENING POST

A Sweet Lift



Utah and Idaho Sugar Company recently faced the problem of quick distribution of sugar to bakeries and candy factories by having a special rig built incorporating straight hauling as well as efficient lift of the load. Fruehauf Trailer Company's Milwaukee branch designed and assembled the rig, using a body and hoist built especially by Gar Wood Industries, Inc. Trailer is loaded by conveyor equipment directly from the rail car into hatches at the top of the trailer body. At destination, the sugar flows from a coupled opening and valve at the baffled rear of the trailer body, through an 8-in. hose, and into conveyors which carry the sugar into the plant. Power for operation of the hydraulic lift is supplied by a Model No. K-660 engine manufactured by Kohler Co.

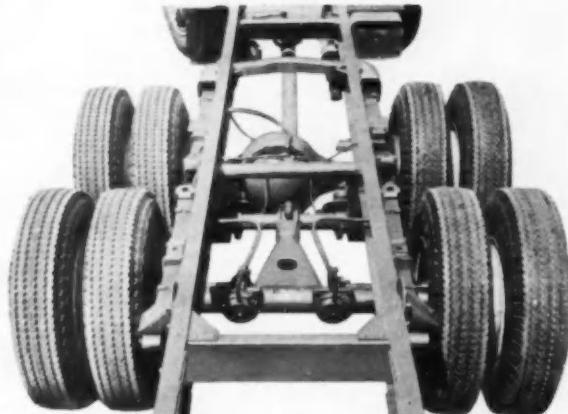
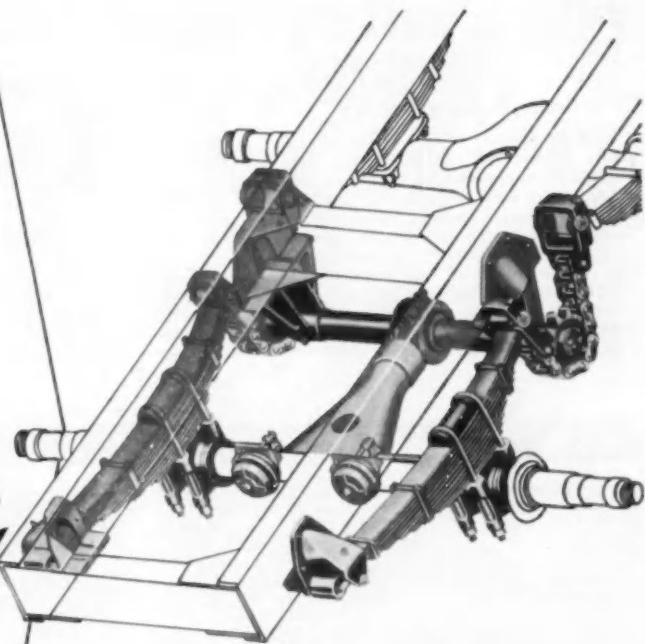
DOUBLE YOUR PROFITS
with
THE NEW LOW-COST
UNIVERSAL
Trucktor®
Kit

Now, truck owners can convert 4-wheel trucks into double-payload Trucktored 6-wheeler at a substantially lower cost than was ever before possible . . . with the New Universal Trucktor Kit.

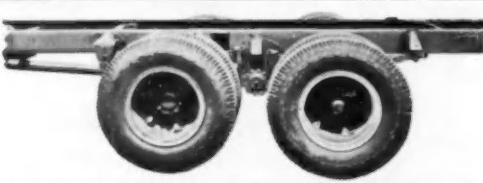
The Universal Trucktor Kit provides all the necessary parts to install . . . using your trailer axle with air or hydraulic brakes and wheels . . . a tubular trailer axle rated at 18,000 lbs. capacity.

Installation of the Trucktor Tandem Axle is a comparatively simple operation which can be accomplished by either the truck owner's regular maintenance crew or any well equipped service garage.

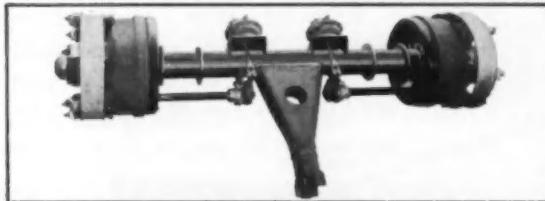
The result is a 6-wheel unit truck that carries the highest legal payloads at the lowest cost.



View showing complete assembly installed at Trucktor factory, using parts furnished with Universal Trucktor Kit.



Side view, showing brackets, chain-and-sprocket load divider and wheels of Tandem Axle.



View showing how yoke, spring seat collars, and brackets to hold cam shaft and slack adjusters are welded to axle.

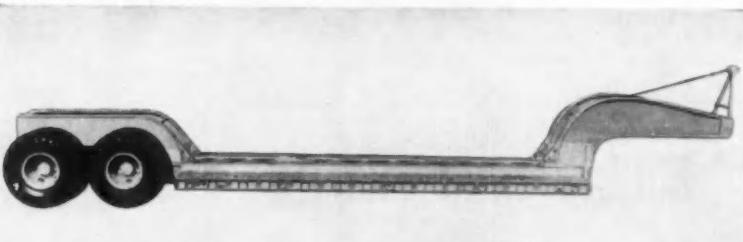
See your Truck Dealer, Trucktor Distributor, or write direct
 to the Trucktor factory.

THE TRUCKTOR CORPORATION, ROUTE 22, MOUNTAINSIDE, N. J.

Safety IS NO ACCIDENT — Trucktor 6-Wheelers ARE SAFER!

Front or Rear Loader

Talbert Trailer's new 100-ton capacity Model No. TDW-100-RG low-bed trailer is shown above. It provides quick, easy, safe over-the-front-end or over-the-rear-end loading by means of Talbert's patented removable gooseneck and removable rear axle assembly. Construction of the rear axle assembly features full width solid bar axles and massive, cast steel walking beams. Standard specifications call for a deck length of 24 ft, but additional



deck length is available on special order. Deck design illustrated shows drop-side construction which provides a minimum deck height. Addition of a simple wedge device permits road

clearance to be raised or lowered depending upon operating conditions. Overall length is 45 ft 7 3/4 in., and overall width is 11 ft. Tire size is 16.00 x 25-20 ply.

BRADEN WINCHES



Another Job Made EASIER with a BRADEN Winch

Every week we hear of new ways BRADEN owners are putting their BRADEN Truck Winches to work. BRADEN'S ruggedness, safety and dependability, make them economical on any handling job.

BRADEN Winch sizes are available from 3,000 to 100,000 pound capacity models, to fit any make of truck. Be Safe . . . use BRADEN Truck Winches.

BRADEN WINCHES ARE IN SERVICE AROUND THE WORLD

Write for Complete Catalog

BRADEN WINCH COMPANY
P. O. Box 547, Broken Arrow, Oklahoma



New Products

Continued from Page 172

chrome-plated, pre-lubricated rollers line the new hose guide channel. Ceiling mount, with inlet hose, adaptor body and the mounting itself, comes as one assembly. Choice of 10 hose assemblies are available: standard valve, "Adjustashot" valve and "Adjustashot" valve with high-low adapter for the chassis lube; three gear lube assemblies with totalizing meter, standard meter or control valve; totalizing meters on the motor oil and automatic transmission assemblies and flex-tip chuck for air and flex-tip valve for the water hose assembly.

P26. Tarp Fabric

C. R. Daniels, Inc., Daniels, Md., announces new Vinyl or Neoprene coated nylon for maintenance use such as, material and equipment covers, aprons, truck covers, etc. Daniels says its nylon fabric, DANTEX, is over five times as strong as the same weight of standard treated canvas. They also claim these fabrics are unaffected by oil, grease, most acids, and temperature extremes; are easily sewn on conventional machines or may be cemented; are completely waterproof (will actually hold and carry water) and may be made flame resistant.

P27. Hydraulic Press

Manley Division, American Chain & Cable Co., Bridgeport, Conn., announces a 150-ton hydraulic press similar in design and construction to Manley's 60 and 80-ton models. Unit's hydraulic cylinder is of welded construction to permit rams to be made of various hydraulic travels. Features include improved table raising mech-

(TURN TO PAGE 178, PLEASE)

They've Proved Their Dependability—That's Why

7 OUT OF EVERY 10
Tubeless Truck Tires are Mounted on
**Firestone
RIMS**



**Firestone Pioneered the One-Piece Rim
With the 15° Taper . . . Now it's Become
the Standard of the Industry**

*Specify them on your new vehicles . . .
Change over your present equipment today*

- **NO WOBBLE**

Runs true because it's
built true.

- **ABSOLUTELY SAFE**

No rings to blow off . . . 15° taper
makes one-piece construction
possible.

- **INCREASED PAYLOAD**

Up to 108 lbs. less weight per
axle.

- **INTERCHANGEABLE**

Easy to mount . . . mates with
conventional rims on dual
wheels.

For Further
Information
Call or Write

FIRESTONE STEEL PRODUCTS CO.
AKRON 1, OHIO

Or Your
Nearest Rim
Distributor



Here is the AUTO-LITE transport spark plug ignition-engineered for heavy duty fleet use

There is no tougher test of spark plug reliability and performance than that encountered in fleet operation. The close relationship of engine efficiency and economy to ton-mile costs and profits justifies every effort to build spark plugs that give extra service under widely varying load and running conditions.

Auto-Lite has gone "all out" and ignition-engineered

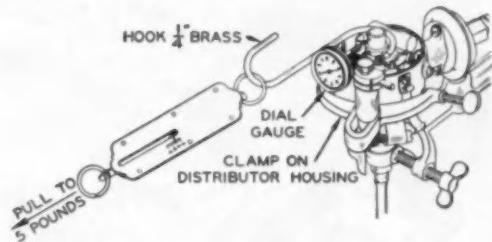
a special Transport Spark Plug for heavy duty, day-after-day hauling. Now in use in leading fleets, it is earning ever-increasing commendation for its outstanding performance in all makes of engines—on all types of jobs.

Check over the features of this great plug, and you'll see why it pays to standardize on Auto-Lite Transport Spark Plugs for your entire fleet.



AUTO-LITE SERVICE TIPS

DISTRIBUTORS that are up to specifications will never give trouble, so always check every part carefully against factory "specs." Don't let a worn bushing cross you up when making these checks. If the play in a distributor shaft is beyond the wear limits, the gap opening of the contact points will change while in operation, causing a miss or poor engine performance.



To check for bushing wear, mount the distributor in a vise or test fixture. Then install a dial indicator on the distributor housing so the plunger rests against the shaft just above the cam.

Connect a spring scale to the distributor shaft with a large hook. Now apply a five-pound pull to the shaft in line with the plunger of the dial indicator. Read the dial indicator. If the shaft movement is more than .005" with a five-pound pull, the distributor shaft bushings are worn and should be replaced.

HEAVIER INSULATOR with greater resistance to hi-voltage and to breakage.

INSULATOR TIP ignition-engineered to stay clean longer. Safeguards performance.

OVERSIZED ELECTRODES of a special alloy allow the economies of wider gap with reduced electrical and heat erosion.

AUTO-LITE

spark plugs

Auto-Lite manufactures over 400 products, including Spark Plugs, Batteries, Wire and Cable and Automotive Electrical Systems . . . sold throughout the United States and Canada

New Products

Continued from Page 174

anism, side openings in the upright members to permit long shafts to be placed on the table for straightening, improved movable head mechanism to allow press heads to be moved longitudinally across the frame, welded frames to eliminate bolts, improved locking devices and safety overload valves.

P28. Marker Light

Truck-Lite Co., Jamestown, N. Y., is introducing a "sealed-beam" type throw-away marker light for truck and trailer bodies, especially for high cube models. Maker says it exceeds SAE, ICC and state requirements. The lamp, when burned out, is replaced in seconds with a single new sealed unit. It's said to have a long life, sturdy, rust-proof, shatter-resistant, lamp having advantages of a Sealed Beam Unit. Two parts make easy installation and less mainte-

nance. Face mounted model does not penetrate truck body, protrudes only $\frac{1}{8}$ in., is wired from exterior. Flush mounted model protrudes $\frac{1}{4}$ in., penetrates body only $\frac{1}{8}$ in. Rated at 2 cp, 1500 hours life, the beam candlepower output edge lighting is increased by special design Fresnel acrylic lens. Phosphorous bronze contacts solidly embedded in plastic are integral part of lamp.

P29. Dust Collector

The Zack Co., Chicago, announces a line of dust and fume collectors for spray booth use. Essentially, these units consist of a cylindrical drum and internal wash-producing structures. Dust-fume collectors incorporate flat bottoms in their design. These serve as settling tanks from which the water is recirculated. A chute type of cleanout is provided for simple hand cleaning of settling tank. These wet-type dust-fume collectors are also produced with flight conveyors for automatic ejection of sludge from tanks to containers. They come in the following models: (1) Floor type, hand clean-out complete with built-in fan in small sizes, or separate fan mounted vertically above collector in larger units. (2) Floor type with sludge conveyor for larger sized units operating on heavy dust loads. (3) Floor type units for overhead mounting to meet existing conditions. (4) Cone type bottom units for overhead or truss mounting. (5) Systems involving one or more cone type units.

END

Please Resume Reading Page 88

MORE THAN 1,000,000
DIFFERENT SPECIES OF
Bugs
ON EARTH

But Not One in the
BARTLETT HYDRAULIC
5th WHEEL

For Busy People Who Want to Cut Costs NOW!
Unlimited Lifting Capacity for Piggy-Back Operations. Now Used by All Truckers, Railroads, Excavators. Roller Unloading.
"RECOGNIZED AS THE BEST"

14" & 24" Lifting Heights
Reinforced to Carry Any Weights with Little or No Service
Less Parts to Lubricate
Pays for Itself by Labor Saving in 90 Days
Saves Repairs to Trailers

CONTROLS •
VACUUM OR AIR OPERATED
IT CAN BE INSTALLED BY A LOCAL DEALER IN YOUR CITY OR IN YOUR OWN SHOP
PRINTS FURNISHED FOR INSTALLATION

ADAPTER TO FIT FULL AUTOMATICS

BARTLETT TRAILER CORPORATION

3080 ARCHER AVE. • CORNER OF ASHLAND • CHICAGO 8 • VIRGINIA 7-1140



A streamlined enclosure of fiber-glass reinforced plastic for the world-famous Jeep has just been put on the market by Reinforced Plastics Corp., Vineyard Haven, Mass. Tested by the Engineering Dept. of Willys Motors, this new product carries Willys factory approval. Two side doors are quickly removable while the rear door slides upwards and inside the roof like the well known garage door. Whole top is also removable as it is held to the Jeep body with six removable fastenings. For further information, circle P 46 on the postcard on page 84.

"DULUX" enamel on modern Sites trucks

stays bright on rugged Oregon hauls



Herman Sites, President, likes the rugged, brilliant "Dulux" gloss that reflects the progressive management of his 160-unit fleet . . . has seen the company grow 2,000% since 1938.



Dan Leary, Maintenance Superintendent, likes the way "Dulux" sprays on smooth and dries quickly to a high gloss. Sites trucks are finished in sparkling "Dulux" yellow and green.



DULUX
enamel

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

SERVING 84 OREGON communities, the bright yellow-and-green trucks of Sites Freight Lines log 1,135,000 miles a year through the Cascade Mountains and the ice and winds of the Columbia River Gorge. A tough test of truck finishes! And with a half-million-dollar modernization program just completed, Sites has a high standard of appearance.

To meet these high standards, Sites uses both "Preparakote" Primer-Surfacer and "Dulux" Enamel color coats. President Herman Sites reports that this combination is "extremely satisfactory in both wearing quality and in retaining its original brilliance."

"Dulux" Enamel helps Sites maintain their reputation for dependability, too. Its quick, trouble-free application and fast drying get jobs out of the shop right on schedule. And durable "Dulux" cuts repainting to a minimum. So for rugged durability and lasting beauty, take a tip from Sites. Keep your fleet looking its best with Du Pont "Dulux" Enamel. E. I. du Pont de Nemours & Co. (Inc.), Refinish Sales, Wilmington, Delaware.

ASF Safety 5th Wheels now standard equipment ... because of **Super Service**

Ray Carter, General Superintendent of Maintenance for Super Service Motor Freight Co., Inc., in Nashville, operates on the principle that a dollar *saved* on maintenance is a dollar *earned* in profit. Read what he says about the performance record of ASF Safety 5th Wheels:

"In 1948 we installed one ASF Fifth Wheel for test purposes. Since that time we have converted our fleet 100% to ASF, our experience having been so good that we specified ASF on the 172 new Super Powered White Diesel tractors that were recently put into service.

"During the entire 7-year period we have reduced our maintenance costs to an absolute minimum; no parts replacement or broken castings from normal usage. And, through the use of inexpensive shims, we have maintained a slack-free 5th wheel coupler.

"Last, but certainly not least, is the weight saving. ASF's wide-base mounting brackets allowed us to eliminate the 120-lb. mounting plate formerly used."

Frankly, there isn't much we can add to that statement: it tells the whole story itself. A test . . . a check of the results . . . and enthusiastic approval. Fleet after fleet has done the same—and fleet after fleet will now accept no substitute for this outstanding wheel.

That's why we say this to *any* fleet: *try just one ASF Wheel* and watch your costs go down! See your nearest ASF Distributor or write to American Steel Foundries, Hammond Division, Hammond, Ind.

Make an investment in safety...with

ASF
safety 5th wheels



**Remember
about**

*Wide choice of brackets—
exclusive with ASF—
permits leading fleets to save
weight and money by
eliminating mounting plates*



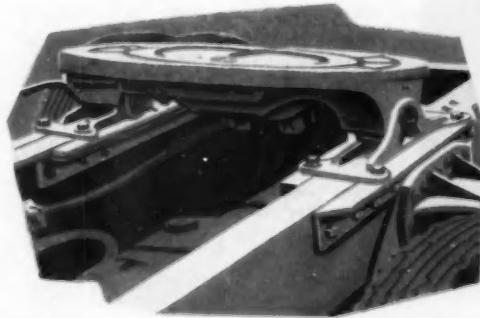
for

Super Service



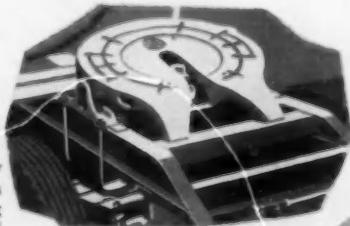
One of 172 new Super Service diesels—100% equipped with ASF Safety 5th Wheels—making up the fleet that offers dependable freight service between the East and the South.

this...
ASF Safety 5th wheels



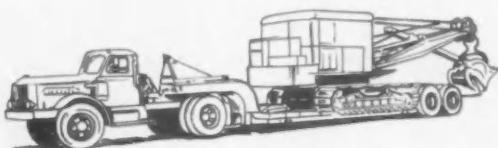
ASF Safety 5th Wheel—
mounted direct to frame—
through use of angles and
wide-base bracket. Cost and
weight of mounting plate
are eliminated!

Another way of securely
mounting ASF Safety 5th
Wheels without a mounting
plate, using U Bolts and
suitable filler on the frame
rail to get required height.
Stop blocks prevent shifting.



The Milk Route

Continued from Page 69



ERIE WHEELS

Choice of the *Cognoscente



ERIE MALLEABLE IRON CO.
ERIE, PENNSYLVANIA



*THE MAN WHO KNOWS

about 77 per cent of the trucks were insulated, while nearly 50 per cent were refrigerated. The greater use of refrigeration and insulation on wholesale trucks can, of course, be accounted for by the fact that many of the wholesale route trucks are used to deliver ice cream and other chilled products to retail outlets.

Despite some problems connected with cost and weight, the survey showed there is a good deal of interest in the use of refrigerated trucks on retail routes. Among advantages cited for the equipment were: added flexibility, simplified delivery, employee satisfaction, increased customer approval, and reduced need for space in the cooler room since trucks can be loaded on the day before delivery.

Automatic Transmissions

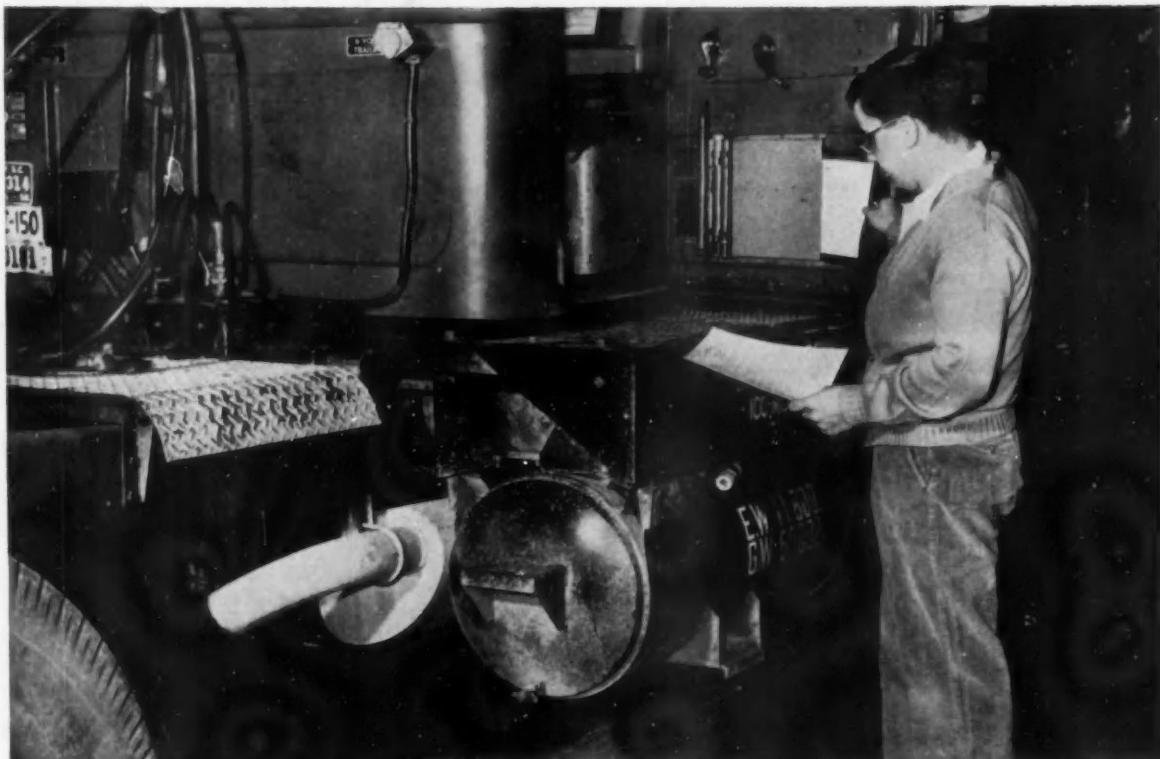
Stand-up bodies are now widely accepted for retail delivery units, and more than 70 per cent of the companies surveyed reported that they were considering automatic transmissions for their retail trucks.

As might be expected, the survey revealed that relatively few large trucks are used by milk distributors. Of the vehicles used by companies reporting, 17.1 per cent were less than 1 ton in size, 34 per cent were 1 ton, 26.1 per cent were 1½ tons, 14.1 per cent were 2 ton models and only 8.7 per cent were 2½ tons or over.

According to the Department of Agriculture, the single most important adjustment in the direction of lower distribution costs for milk was the institution of every-other-day delivery schedules. Started in some cities before the war, and accepted nation-wide as a war-time conservation measure, EOD service has helped to hold down distribution costs despite increases in equipment and labor costs. Other factors have been effective maintenance programs.

END

Please Resume Reading Page 70



101 Mufflers Made of Special Armco Steel Average 180,000 Miles . . . Still in Service

Super Service Motor Freight Company, Nashville, Tennessee, is setting mileage and service records with mufflers made of Armco ALUMINIZED STEEL.

Here's the story, as Homer W. Burns, Superintendent of Maintenance at Nashville, told it:

"Our fleet operates in rugged, hilly country, where hot engines burn out ordinary mufflers in a hurry. With our old carbon steel mufflers, the most we got was 40,000 miles' service before replacement.

"In the spring of 1954, we switched to mufflers made of Armco ALUMINIZED STEEL for our new fleet of 140 diesel tractors. As of December 1, 1955, we still have 101 of these mufflers in service on tractors that have averaged 180,000 miles. Even on the 39 which have been replaced to date, the average was 131,000 miles. It's easy to see why we've cut way down on shop time and other costs for muffler replacement."

Fights heat and corrosion

Mufflers' great enemies, heat and corrosion, make little

headway against Armco ALUMINIZED STEEL. The reason is that it's hot-dip coated on both sides with molten aluminum by a patented process. This combination of steel and aluminum resists heat and corrosion better than either metal alone.

Result: Longer muffler life. To your fleet this can mean less down-time for muffler replacement—lower replacement costs.

For names of manufacturers of cost-saving mufflers made of Armco ALUMINIZED STEEL, just fill in and mail the coupon.

ARMCO STEEL CORPORATION, 1056 Curtis St., Middletown, O.

Send names of muffler manufacturers who use ALUMINIZED STEEL
for: truck mufflers auto mufflers

Name _____

Firm _____

Street _____

City _____ Zone _____ State _____

ARMCO STEEL CORPORATION

1056 CURTIS STREET, MIDDLETOWN, OHIO



SHEFFIELD STEEL DIVISION • ARMCO DRAINAGE & METAL PRODUCTS, INC. • THE ARMCO INTERNATIONAL CORPORATION



Nebraska's Safety Trailer

To spread the gospel of safety, the Nebraska Motor Carriers' Assn. has developed a "Legion of Safety" program as a public service to its state. Rallying point of the program is a motorized field hospital and disaster unit which could be pressed into immediate service in case of floods, tornadoes, fires or wrecks. The unit is used primarily on a day-to-day basis, traveling the state under supervision of a safety engineer who shows films and addresses civic organizations.

March News Roundup

Continued from Page 108

Alabama Council of Safety Supervisors. The new Council will be affiliated with the Alabama Trucking Assn. and with ATA's Council of Safety Supervisors.

New York Maintenance

John W. Limpert, Standard Brands, Inc., fleet manager, has been elected president of the Motor Truck Maintenance Club of New York. Other officers elected include James J. Irwin, Brunswick Laundry fleet superintendent, as vice president, and Willem A. Kerkum, Tide Water Associated Oil Co. automotive engineer, as secretary-treasurer.

College Grad Drivers

During 1955, a total of 335 students entered the North Carolina Driver Training School at North Carolina State College (May '55, page 76). Many truck fleets took a hand in promoting enrollment of potential drivers. Leaders in this, as reported by the College, were Akers Motor Lines (71 students), Pilot Freight Carriers (44) and Carolina Freight Carriers (33).

College Scholarships

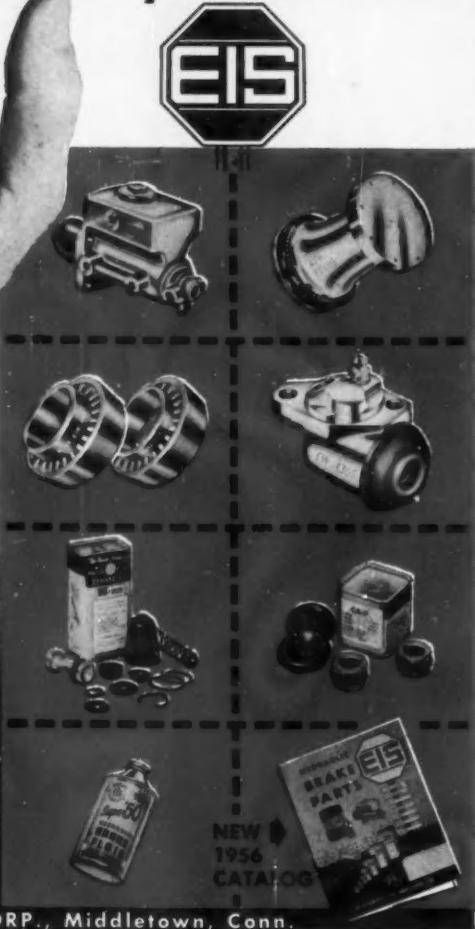
Tri-State College, Angola, Ind., announces availability of six \$500 scholarships in its motor transportation course. Scholarships are made available by Expressways, Inc. (3), C. and J. Driveaway, Aero Mayflower Transit and Federal Express. ATA has available a list of 257 colleges and universities offering courses in one or more of the following subjects—traffic management, transportation, motor transportation and highway engineering. List can be had by writing Public Relations Dept., American Trucking Assns., 1424 Sixteenth St., N.W., Washington 6, D.C.

(TURN TO PAGE 220, PLEASE)

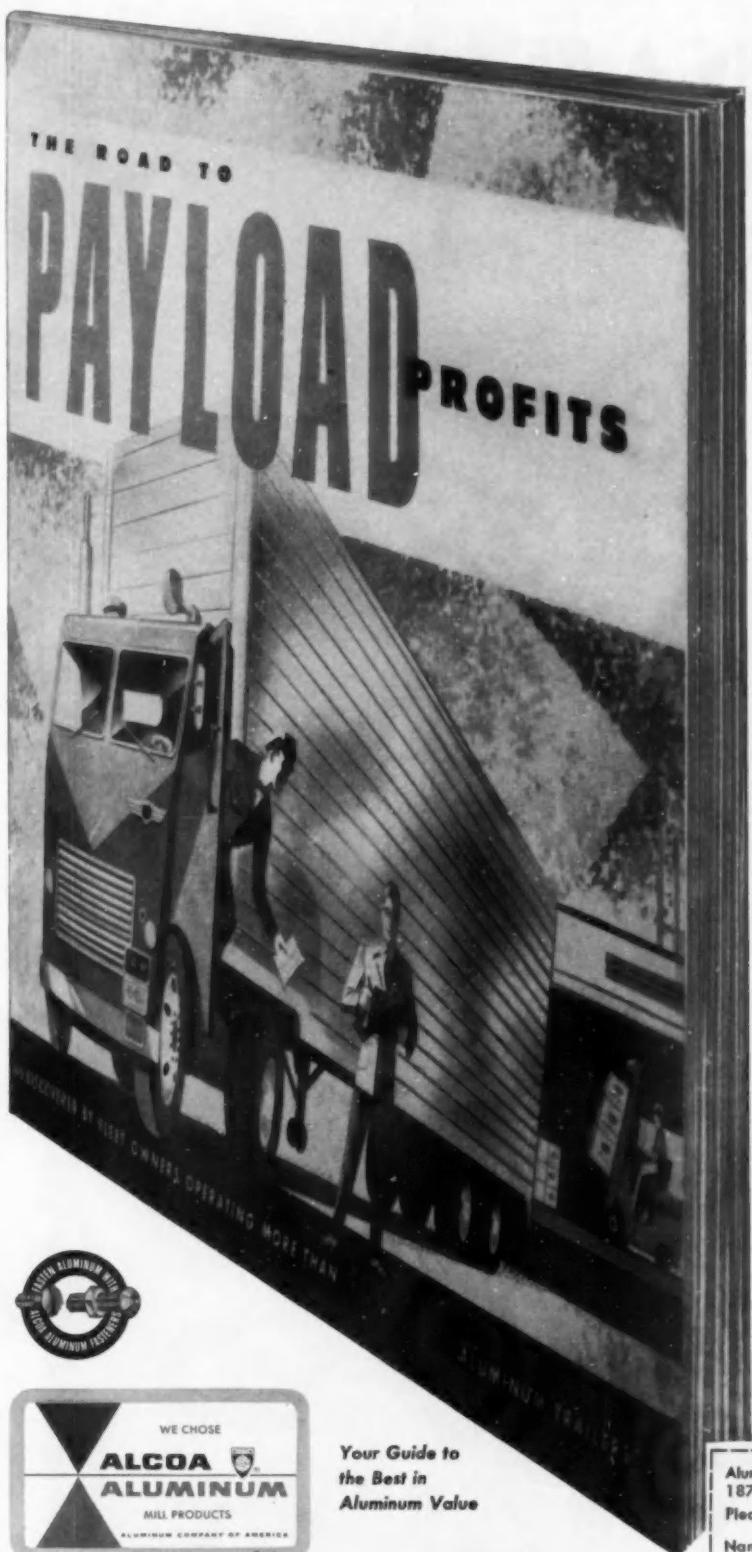


**EIS MAKES
BETTER PARTS
TO MAKE
BRAKES BETTER!**

**BETTER SERVICE!
BETTER PACKAGED!
BETTER CATALOGUED!
BETTER PRICED FOR A
BETTER PROFIT!**



**NEW
1956
CATALOG**



Your Guide to
the Best in
Aluminum Value

THE ALCOA HOUR
TELEVISION'S FINEST LIVE DRAMA
ALTERNATE SUNDAY EVENINGS

YOU CAN PROFIT

by the 30 case histories *
contained in this brand
new, 50-page Alcoa book . . .

* Operators of Van Trailers,
Bulk Haulers and Tankers say
**"Alcoa® Aluminum Makes The
Difference" in profits and
payloads.**

WANT A COPY?

Aluminum Company of America
1876-C Alcoa Bldg., Pittsburgh 19, Pa.
Please send me a free copy of *The Road to Payload Profits*.

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

ANNOUNCING A NEW PRODUCT—

featuring a

HANSEN TRIANGLE REGULATOR

*Especially Designed
for Sliding Doors*

FEATURING a new principle of application and operation, a new TRIANGLE REGULATOR for WINDOWS on SLIDING DOORS is shown.

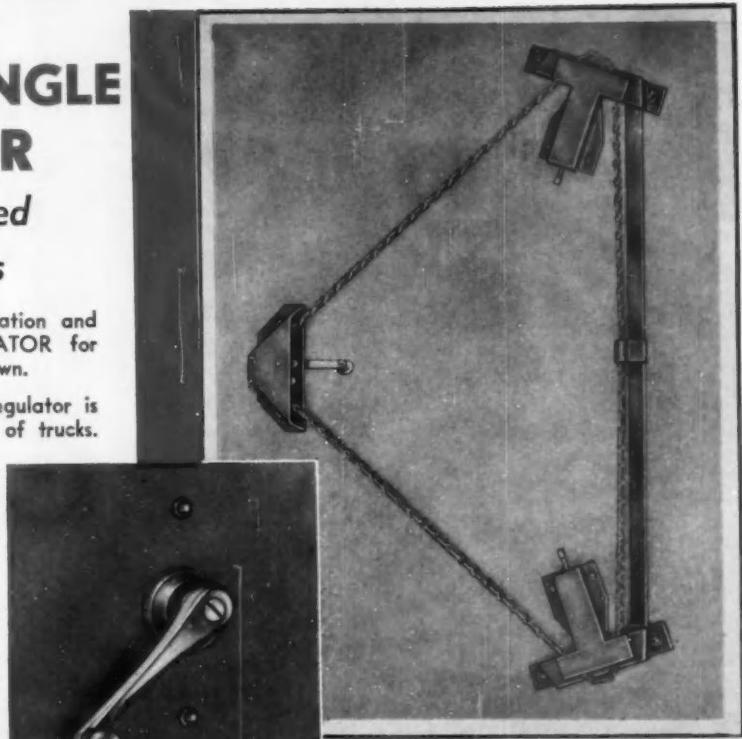
This Triangle Sliding Door Window Regulator is used on sliding doors of delivery type of trucks. Permits the entry of fresh air without opening door.

Easy to install. After dimension between handle and regulator is determined, chain is cut to size and fastened to channel clip.

This is the only Regulator that can be used with a sliding door. Why? Because Regulator can be mounted with handle on front edge of door, and does not interfere with door sliding into door pocket.

The above arrangement provides complete safety, with unobstructed view and wide space for full ventilation.

Get full details of this new Hansen product, fully described in new catalog. Send for your copy.



ABOVE—Application view of No. 89 Hansen Triangle Window Regulator. For either right or left-hand application as required. Regulator is made in five lengths—10", 20", 29", 34" and 36".

ABOVE—Inside operating handle which attaches to control mechanism of No. 89 Window Regulator, for raising or lowering of window.



Modern package delivery unit. Built by Aerobilt Body Company, Athens, N. Y. Hansen No. 89 Triangle-type Window Regulator is used for operating window in sliding doors.



A NEW CATALOG containing MANY NEW PRODUCTS for the Body Builder

Besides the new Triangle Regulator, Hansen's New Catalog features for the first time many outstanding advances in Body Hardware. SEND FOR YOUR COPY!



FOR POWER... FOR PROFIT

McQUAY-NORRIS COMPLETE LINE SERVICE



To make a profit you've got to keep your trucks on the road and out of the repair shop. That calls for dependable Chrome Control Leak-Proof piston rings and McQuay-Norris parts. They're built to last!



CHROME CONTROL

LEAK-PROOF

PISTON RINGS

This set will outperform any other piston ring set in the "hard-to-hold" jobs regardless of kind, design or price.



McQUAY-NORRIS MANUFACTURING COMPANY • ST. LOUIS 10, MISSOURI

"Long tire life-*

with the minimum of maintenance!"



**More proof that KELLYS
deliver real tire economy!**

If you've never used Kellys you just don't know how really low you can push your tire cost per mile. In fact, once you try Kellys, chances are your eyes will be opened to some entirely new ideas of tire economy and tire performance!

Consider, for example, the experience of Joralemon Brothers, Inc. Mr. Joralemon's letter, reproduced on the opposite page, is

proof of what we mean. We receive many scores of letters telling of similar records with tough Kelly truck tires. You'll find it worthwhile to get all the facts about Kelly—to learn how Kelly tires can give you better service and save you money at the same time. See your local Kelly Dealer, or write to: The Kelly-Springfield Tire Company, Cumberland, Maryland.

**There's a tough Kelly
for every trucking job!**



OFFICE RUTHERFORD 2-4708-81-82
NIGHT CALL RUTHERFORD 2-4511

JORALEMON BROTHERS, Inc.

626 RIDGE ROAD, LYNDHURST, N. J.

CONTRACT CARRIERS

PERMIT No. 59999

Operating between
CONNECTICUT DELAWARE MARYLAND
NEW JERSEY NEW YORK PENNSYLVANIA

Kelly-Springfield Tire Co.,
Cumberland,
Maryland

Gentlemen:

We operate over fifty pieces of equipment throughout eight of the New England and Central Atlantic states. Our operation consists of hauling cast iron water pipe for long distances, and in many instances placing the pipe where roads are under construction, or where there are no roads at all.

To meet our requirements tires must stand up under extreme heat and cold. It is also necessary that they withstand punishment of all kinds of roads and have treads that maintain traction in soft dirt, mud and snow. Last, and most important, it is necessary that we get long tire life with the minimum of maintenance.

* Kelly-Springfield tires have met these requirements in our operation for the past twenty years, and it gives us great pleasure in the recommendation of these tires to the industry.

Very truly yours
JORALEMON BROTHERS, Inc.

Warren Joralemon
President

WHJ/L

SUPER ARMOR TRAC

DUAL TRAC



"L-STEP"

For under cab mounting. Transfers from 300 to 500 lbs. weight to front axle . . . full length safety running board feature. Brackets separate from tank, eliminating strain on tank heads. 75, 60, 50, 40, 30 gallons capacity for single tank.



"OB-ROUND" SINGLE

Designed to hug the frame . . . all Prior Safety Features . . . convex type head and lap welded seams . . . installation without welding or drilling. 54, 47, 42, 40, 35, 31 gallons capacity.



"CYLINDRICAL" SINGLE

Center or end fill . . . dished heads . . . removable fuel supply line . . . installation without welding or drilling. 60, 56, 52, 49, 40, 38, 35 gallons capacity.



"OB-ROUND" SETS

Center or end fill. Stays well within rear tires, riding frame closely. Add less weight per gallon. Six regular sizes: 108, 94, 84, 80, 70, 62 gallons capacity in sets.



"CYLINDRICAL" SETS

Cylindrical construction resists collision. Curved angle irons; pilfer-proof tool chest and jack-well plus all modern safety features. Five regular sizes: 120, 112, 104, 80, 70 gallons capacity in sets.



"SADDLE MASTER"

Ob-Round construction with convex type heads for greater impact protection . . . lap welded for greater strength. Stress relieving safety baffle. Four regular sizes: 150, 135, 125, 105 gallons capacity.



"MILEAGE MASTER"

Separated tanks relieve strain and eliminate seam cracking. Either tank unit replaceable in event of collision. Four regular sizes: 150, 135, 120, 105 gallons capacity.

Underwriters Laboratories, Inc.
INSPECTED
AUTOMOTIVE FUEL TANK
No. A-11458

Meets J. C. C. Requirements for
Side Mounted Fuel Tanks
50 GALLON CAPACITY 50 AIR SPACE ALLOWED

Prior
GASOLINE OR DIESEL
SAFETY
TANKS

BUY TANKS LIKE TRUCKS ... TAILORED TO THE JOB

Why carry excess fuel weight? Equip your truck with the proper size and style tank for the job it has to do. Every gallon of excess fuel carried means a reduction of approximately six pounds pay load.

Don't equip your truck with 125 gallon capacity tanks if you only need eighty gallon capacity to do the job.

Prior offers the most complete line of safety fuel tanks on the market. Every Prior Safety Tank carries the Underwriters' Label and meets I.C.C. requirements.

It will pay you to see your nearby Prior Safety Tank Distributor for analyzed recommendations of the correct size and style safety tank to meet your specific requirements.

PRIOR PRODUCTS, INC.

P. O. BOX 7608

P. O. BOX 349

DALLAS, TEXAS

MIDDLETOWN, OHIO

The complete HEIN-WERNER line provides the right jack for every job!



Model E1.7A
Cap. 3000 lbs.
Low 7"



Model E3.9A
Cap. Tons 3
Low 9"



Model E5.9A
Cap. Tons 5
Low 9"



Model E8.9A
Cap. Tons 8
Low 9"



Model E12.9A
Cap. Tons 12
Low 9"



Model 20.10AA
Cap. Tons 20
Low 10"



Model 30.11AA
Cap. Tons 30
Low 11"



Model 50.12AA
Cap. Tons 50
Low 12"



Model 100.12AA
Cap. Tons 100
Low 12"



Model V-1.20
Cap. 3000 lbs.
Low 4½" to 15¼"



Model O'BOY
Cap. 2500 lbs.
Low 4-5/16"



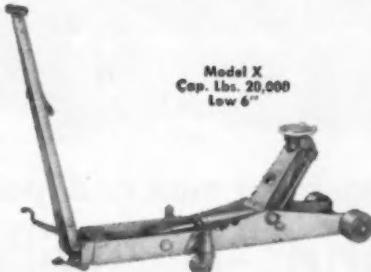
Model WS
Cap. Lbs. 3000
Low 4"



Model K
Cap. Lbs. 4000
Low 4"



Model GG
Cap. Lbs. 8000
Low 4"



Model X
Cap. Lbs. 20,000
Low 6"



ADJ. STANDS
Model CS-2.12
Cap. 2 tons
Low 12"
CS-7.18
7 tons 18"



PUSHMASTER HYDRAULIC JACK & ATTACHMENTS
Model F-4 Capacity 4 tons



''PUSH and PULL'' HYDRAULIC JACK
Available in Models of 4, 10, and 20 tons capacity

Model "55"
Cap. Tons 1½
Low 8"



Model "Screwball"
Cap. Tons 1½
Low 8"



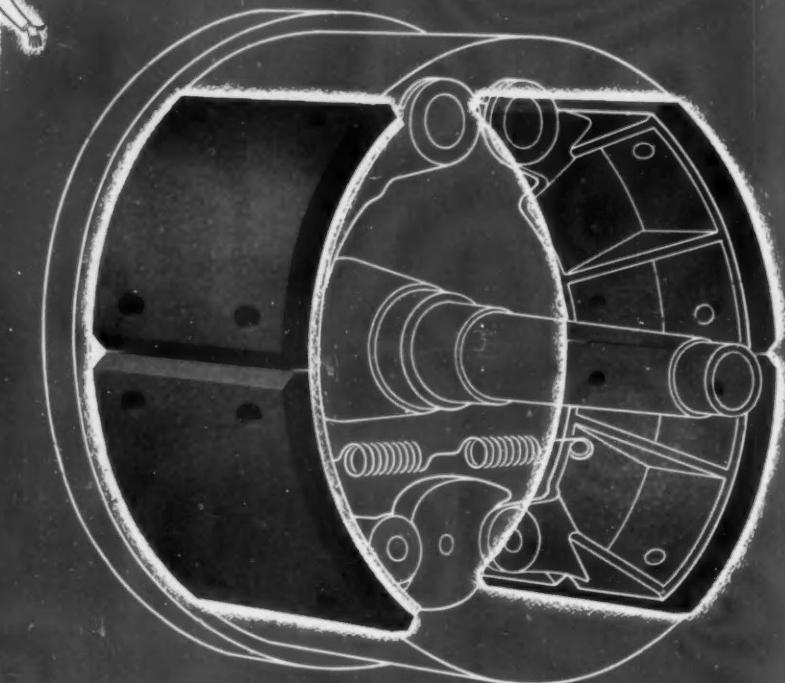
See your H-W jobber today or write us for details.

HEIN-WERNER CORPORATION, WAUKESHA, WISCONSIN

Hein-Werner
HYDRAULIC JACKS

HEIN-WERNER MANUFACTURES AND SELLS MORE HYDRAULIC JACKS THAN ANY OTHER COMPANY IN THE WORLD TODAY!

I like Johns-Manville Brake Blocks because they assure more dependable schedules with greater safety...



I like them because they give us greater mileage and longer trouble-free service

Management man and maintenance man . . . both say
Johns-Manville Brake Blocks
give top performance at lowest cost per mile

To meet the widest possible range of braking conditions, Johns-Manville Brake Blocks are supplied in individual units, or combination sets of high, medium or low frictional characteristics. This flexibility permits custom engineering for every type of brake to meet every type of condition encountered in the operation of bus and truck fleets.

To bus and truck operators, this means lower brake cost per mile, smoother stops, minimum shop and out-of-service time. Most of all, it means *dependability under all driving conditions*. If you would like more information on Johns-Manville Brake Blocks, write Automotive Division, Johns-Manville, Box 60, New York 16, N. Y. In Canada, Port Credit, Ontario.



Johns-Manville *asbestos* **FRICITION MATERIALS**

Do YOU know these facts... about the first really NEW 5th Wheel built in years?



Two of the first things Maintenance Superintendents ask about are . . . "How does the new Simplex 5th Wheel work—and how is it built?" So we're going to answer those ques-

tions right here. Then, as to whether or not the Simplex Wheel will cut your maintenance costs, increase safety, reduce dead weight . . . well, you draw your own conclusions!



Q. How is the Simplex plate built?

A. Plate is a one-piece, carbon-steel casting . . . webbed and reinforced, with ample grease grooves.



Q. How is Simplex plate attached to brackets?

A. The diagram tells the story: the design cushions road and coupling shocks.



Q. How does the Simplex lock work?

A. First, when the safety latch is in locked position, you know the jaws are locked. The construction is such that it can't be any other way. Underneath, all parts interlock. Jaw pivots on double-an-

chored pin for perfect alignment and to prevent slack accumulation due to tilting.



Q. How is the Simplex Wheel unlocked?

A. Just grasp handle, brush safety latch away with side of hand . . . pull up and out. A simple, one-hand operation.



Q. Why the top flange on the Simplex jaw?

A. To increase the bearing area between king-pin and jaw—which increases life of both. Jaw itself is rugged forged steel.

Q. Is the Simplex Wheel easy to maintain?

A. Nothing could be simpler. Grease fittings are provided for plate and brackets. Any part is easy to remove, if necessary, without dismounting wheel.

Q. What are weight and dimensions?

A. Plate is full 36" diameter. Over-all height, 7 1/2". Total weight: 275 pounds.

Q. How has the Simplex Wheel been tested and used?

A. In lab tests, with 50,000-lb. steady pulling loads and repeated 100,000-lb. shock loads. On the road, with thousands of miles on both single and tandem axle tractors—carrying the heaviest permissible loads. There has never been a case of failure or distortion!

Pound for pound . . . dollar for dollar . . . safety feature by safety feature . . . we match this wheel against any other wheel made. An actual test of the Simplex will tell you the same story. Write for name of your nearest Simplex distributor to:

American Steel Foundries
Hammond, Indiana

Simplex

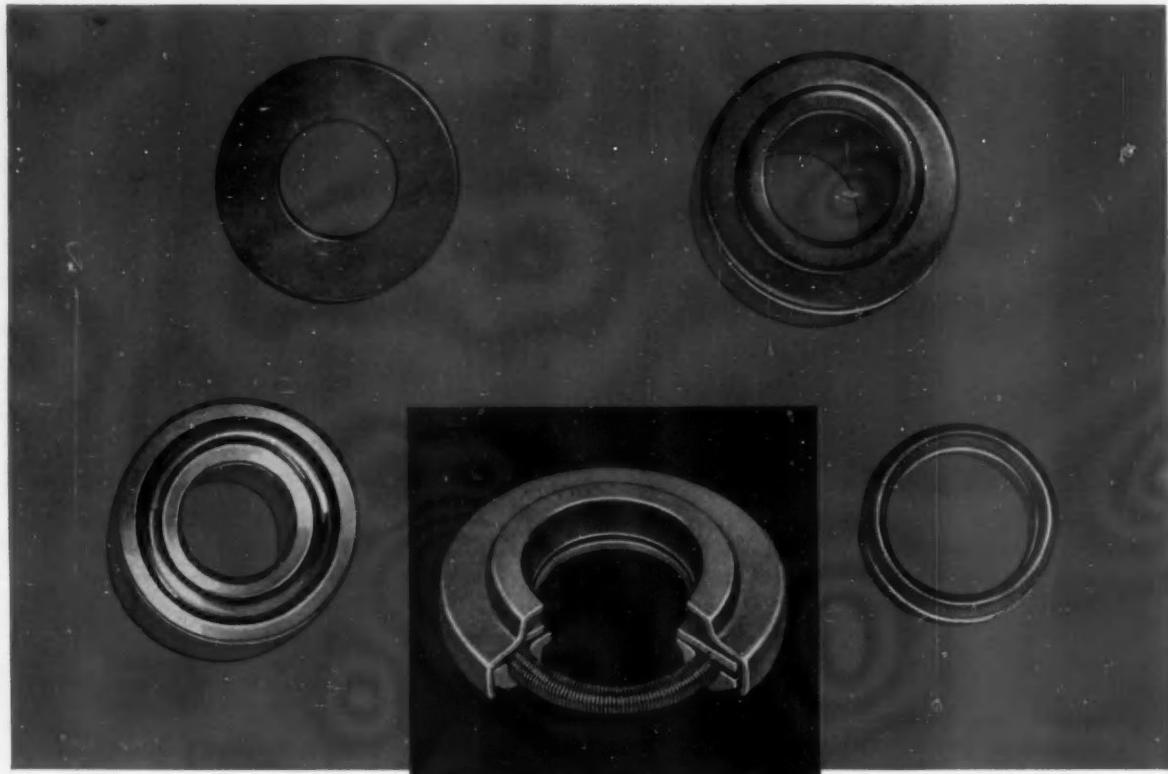
5th wheels

A product of American Steel Foundries



NEW "ROTOCOIL"...

Positive Valve Rotation with only 4 parts



Now you can give your engines *positive* valve rotation at lowest possible cost.

The new Thompson "Rotocoil" has only 4 simple parts. Yet it provides dependable, positive rotation at the slow rotative speeds best suited to minimize valve burning and wear. Valve life is lengthened 3 to 5 times, fuel economy is increased, engine performance remains high longer.

Let Valve Division engineers show you the new Thompson "Rotocoil"... help you work it into present and future engine designs.

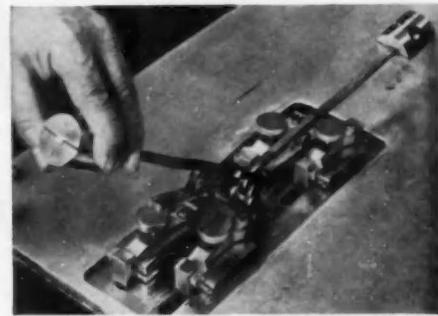
Valve Division Thompson Products, Inc.
1455 EAST 185th ST. • CLEVELAND 10, OHIO



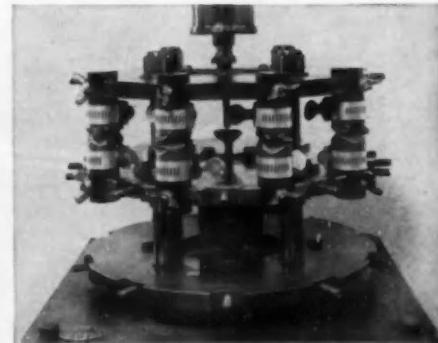
Du Pont "Fairprene"
passes these tests, too!



UNIFORMITY of weight and thickness of "Fairprene" tarp material is assured by beta-ray testing. Thickness of coating is rigidly controlled.



SCRUB RESISTANCE is demonstrated by scrub test . . . insuring a secure bond between the chemical rubber coating and fabric backing.



FLEX RESISTANCE is shown as vibrator telescopes years of service into hours . . . leaves "Fairprene" tarp material with no evidence of cracking.

You're assured of a high-slip, smooth finish with tarps of Fairprene®



Visual proof of the high-slip finish provided by tarps of Du Pont "Fairprene"** is found in the picture above. One weight easily slides down the smooth "Fairprene" surface, while an equal weight catches and stops on the coarse surface of ordinary tarp material.

Tarps of "Fairprene" slide off and on a load just as smoothly. That's why these tarps can be easily handled by one man . . . why they won't snag or stick. Although much lighter than ordinary tarpaulins, tarps of "Fairprene" offer *increased* protection to the load. They're unaffected by grease, oil and most chemicals . . . and are waterproof. No mildewing, rotting or shrinking. Weather- and heat-resistant, they stay pliable and strong in any weather.

For further information on these upkeep-reducing tarps, mail coupon today for your copy of our new descriptive bulletin.

DU PONT INDUSTRIAL COATED FABRICS

E. I. du Pont de Nemours & Company (Inc.)
Fairfield, Conn.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

*"Fairprene" is Du Pont's trade-mark for coated fabrics, sheet stocks, and cements.

E. I. du Pont de Nemours & Co. (Inc.)
Fabrics Division—CC-63, Wilmington 98, Delaware

Please send me your bulletin on "Fairprene" for tarpaulins and swatches of weights available.

Name _____ Position _____

Firm _____

Address _____

City _____ State _____

There's more
to building a battery
than writing
a warranty!





battery warranty alone—no matter how impressive—won't budge your truck an inch. The battery must be quality built all the way through . . . built to live up to its warranty. Delco Extra-Duty batteries now carry a written warranty for *four years*. This is a *new* warranty for an entirely *new* battery . . . and not just an old warranty rewritten for an old battery.

This was an unprecedented move for a nationally advertised, nationally used battery. It followed years of battery development, testing and proving—under rugged fleet conditions—and through the combined engineering facilities of both General Motors and Delco. And when these two names stand unreservedly behind a warranty, you can be sure the battery is every bit as good as the warranty says it is.

So remember, when next you buy batteries for your fleet, you'll get the lowest cost per mile of operation from either a wet or dry charge Delco Extra-Duty battery. And best of all, Delco batteries are available everywhere!

EASILY STORED

Delco dry charge batteries can be stored indefinitely and still give you instant, factory-fresh power without any initial electrical charge.

6- AND 12-VOLT MODELS

There's a right Delco battery built for every specific application and type of service, including the new 12-volt group for 12-volt electrical systems.

SUPERIOR RUBBER SEPARATORS

Delco's hard rubber separators offer a new high in resistance to vibration, acid attack, peroxidation, and severe temperature ranges.

ZIP-CLIP-POUR

That's how easy it is to fill a battery with Delco's new electrolyte package that's safe, convenient and disposable.



AVAILABLE EVERYWHERE THROUGH DELCO BATTERY DISTRIBUTORS

TUNE IN

ON TV..... Spectacular "Wide Wide World" on NBC Network.

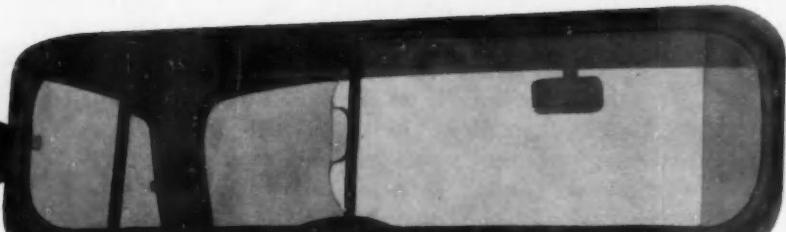
ON RADIO... Lowell Thomas Newcast on the CBS Network.

See local listings for time and station.

Barber's Deluxe Sliding Rear Window For Trucks

The Rear Opening You Have Been Asking For

Barber's
Nationally Famous
Deluxe Sliding
Windows



Pats.
Pend.

Aides Communication, Safety and Ventilation

Fits the original
truck opening

You'll have a full rear work opening for operating your winch controls and straightening cable. You'll be able to hear instructions more clearly and have better ventilation. Your job can be done easier, faster and safer.

Installs
quickly and easily,
in less than 20
minutes

IT'S IDEAL for oil field trucks, movers, wreckers, transports, logging, utility trucks, bodies and general heavy hauling trucks.

Does not
change or damage
the truck cab

Available Immediately
1947-56 Chevrolet
1948-56 Dodge
1948-56 Ford
1947-54 GMC
(up to 700 Series)
1955-56 GMC
1954 Improved, and all
1955-56 Internationals
1955-56 Diamond "Ts"
Restyled

Air conditioning
without refrigeration

Barber's Sliding Rear Windows can be supplied for any truck. These slide easily, contain safety glass, lock when closed, weather proof and stay in. For details write for our brochure.

\$37.50

F.O.B. OKLAHOMA CITY
Subject to Change
Without Notice

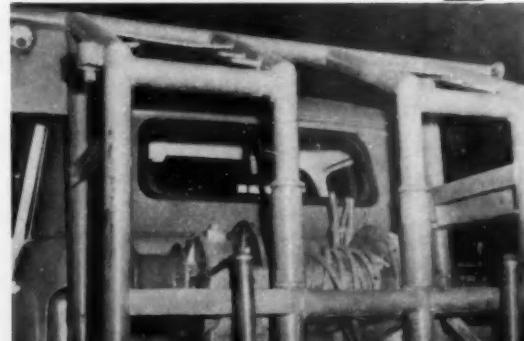
Barber's Well Packaged Unit may be
delivered, overnight, to many areas



Interior View of Barber's Rear Window Unit



FORD



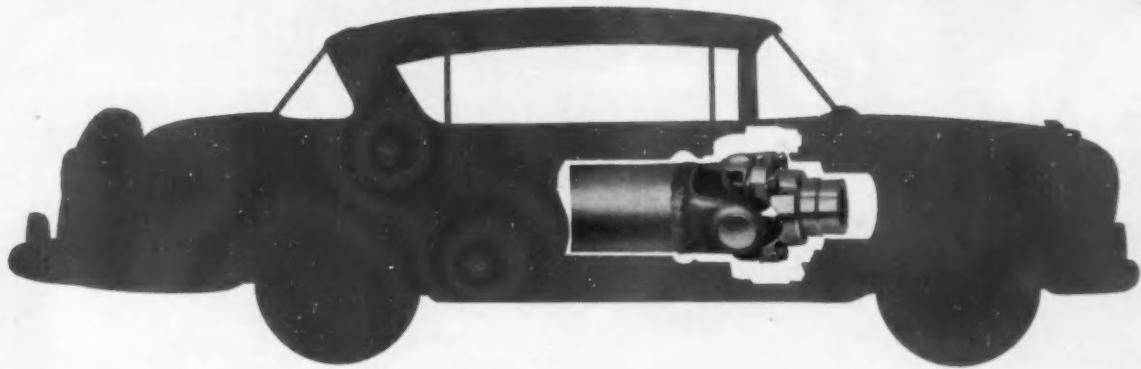
CHEVROLET & GMC



BARBER'S GLASS & MANUFACTURING CO.

13-15 HARRISON, BOX 588, Phone FOrest 5-4358, OKLAHOMA CITY, OKLA.

FIRST



FIRST to make an Automobile Joint smaller—(3-9/16" swing diameter) to reduce the clearance needed by the low floor boards in modern cars.

FIRST to make the smaller joints stronger—(2500 lbs. ft. torque) to meet the needs of higher speed, higher power modern cars.

FIRST to make the smaller, stronger joints lighter—(20% less than other joints having the same torque capacity) to help designers keep overall weight down to modern standards.

FIRST to make the smaller, stronger, lighter joints easier to install—(less parts to handle) to save time and money on the assembly line.

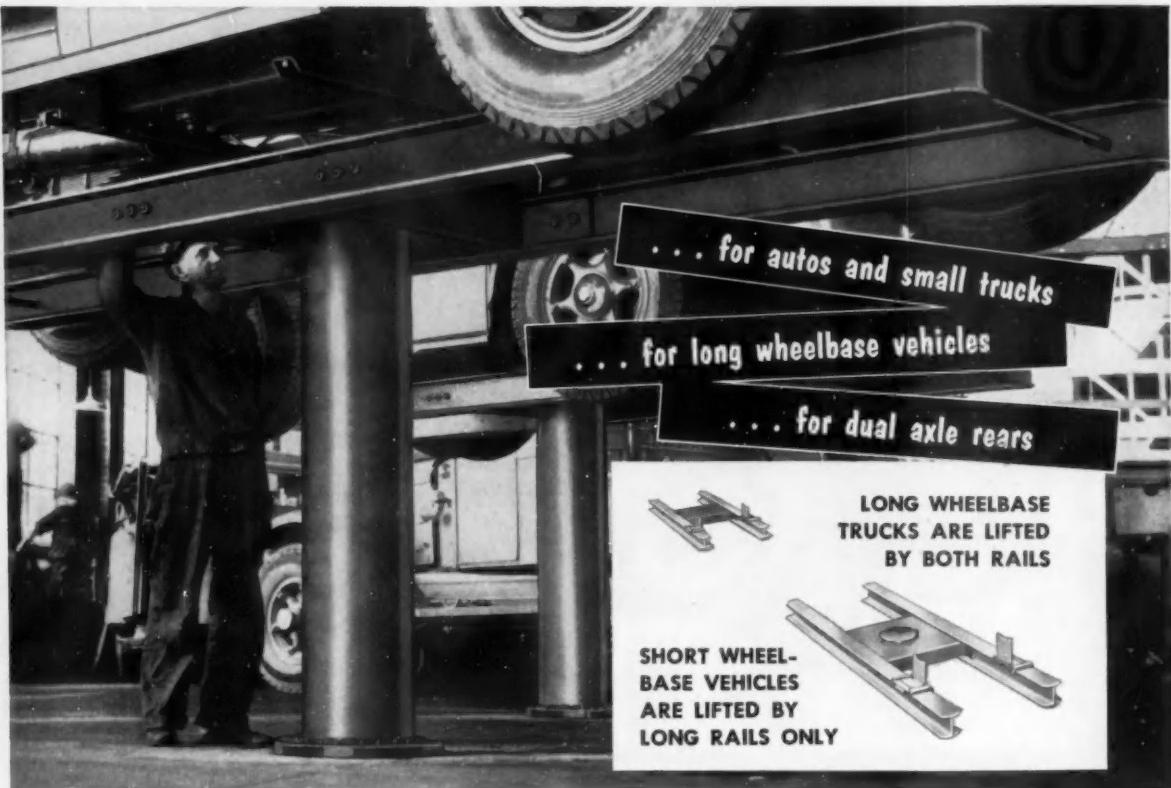
Send a print and specifications of your new model for MECHANICS engineers' recommendations how you can give your next car the benefit of these four competitive advantages—provided by the new MECHANICS joint development.

MECHANICS UNIVERSAL JOINT DIVISION
Borg-Warner • 2034 Harrison Ave., Rockford, Ill.
Export Sales: Borg-Warner International
79 E. Adams, Chicago 3, Illinois

MECHANICS *Roller Bearing* UNIVERSAL JOINTS

For Cars • Trucks • Tractors • Farm Implements • Road Machinery •
Aircraft • Tanks • Busses and Industrial Equipment





GLOBE 2-POST CAR AND LIGHT TRUCK HOIST

EASY TO INSTALL . . . ECONOMICAL TO OPERATE

You can service *all* motor vehicles faster and more profitably with this Universal Hoist. Its flexibility and versatility are amazing. It easily handles trucks, buses, and passenger cars of widely varying weights and wheelbases. The short rails accommodate dual-rear-axle vehicles. Support under each axle assembly removes all weight from wheels.

Easy to install since neither short nor long rails are recessed. Trouble-free operation with little maintenance required . . . low initial cost. Four standard models, capacities 20,000 to 40,000 lbs.; wheelbase accommodations range to 240". Maximum accessibility to the underside of the car is provided; mechanics on their feet work faster, more expertly with all underside parts within easy reach, with tools handy.

GLOBE
THE BEST LIFT®
TRUCK HOISTS

PLANTS: DES MOINES • PHILADELPHIA • LONG BEACH, CAL.



SINGLE POST



TWO POST



FREE WHEEL TYPE
AUTO HOISTS



ROLL ON TYPE
AUTO HOISTS



TWO POST
AUTO HOISTS



TWO POST
TRUCK HOISTS



FOUR POST ELECTRIC
AUTO HOISTS



WHEEL
DOLLY



TRANSMISSION
DOLLY

WORLD'S MOST COMPLETE LINE OF AUTOMOTIVE AND HEAVY-DUTY TRUCK HOISTS

another great fleet reports

BETTER BRAKES

LESS DRUM WEAR—LOWER COSTS

with WORLD BESTOS

RED BLOCK



MR. WARD L. BENNETT, Supt. of Automotive Equipment

says:

"We have been using World Bestos Red Block Combination for five years. It gives us better stopping ability than any blocks we have tested or have tried in service. We certainly get our "money's worth" of mileage . . . and Red Block has greatly reduced our purchases of replacement brake drums."

...BALTIMORE TRANSFER—MOTOR FREIGHT EXPRESS



Baltimore Transfer—Motor Freight Express (1110 truck and trailer units) are widely known for their outstanding preventive maintenance program. A small portion of their extensive shop facilities is shown here.



Prove it for yourself! Try RED BLOCK on your biggest rig.
Call your World Bestos Distributor or write direct to the factory.



WORLD BESTOS

NEW CASTLE, INDIANA



Addison

See this illustration in full color in the Delco Super 11 advertisement, appearing in the March 24th issue of The Saturday Evening Post.

Delco Super 11 Brake Fluid improved with HTD for new braking safety anywhere

For greater braking safety, replace with Delco Super 11 improved with HTD! This new heavy-duty hydraulic brake fluid is original equipment in General Motors cars and trucks. And it is available to you now—everywhere—through the United Motors System. There are four important reasons why Delco Super 11 provides an extra margin of driving safety.

Delco Super 11 improved with HTD is 4 ways better

- More effective operation at 50° higher temperature.
 - Minimizes chance of vapor lock.
 - Reduces loss of fluid by evaporation.
 - Has better lubricating qualities.
- Under all driving conditions new Delco Super 11 improved with HTD makes brakes more dependable.

Moraine Products and General

Motors Research developed this important contribution to greater driving safety. You can get it quickly from your United Motors distributor or General Motors car and truck dealers. Delco Super 11 is packaged in all convenient sizes, from pint cans to 54-gallon drums.



A GENERAL MOTORS PRODUCT — A UNITED MOTORS LINE
DISTRIBUTED BY WHOLESALERS EVERYWHERE



Another General Motors Value



DELCO LINED BRAKE SHOES are built to original equipment specifications. They're best for replacement.



WHEEL CYLINDER REPAIR KIT



MASTER CYLINDER REPAIR KIT

All the parts needed to put a wheel cylinder or master cylinder back in normal operating condition.



Moraine Products

Division of General Motors, Dayton, Ohio



**"OUR PER-MILE COSTS TOOK A DECIDED
DROP WHEN WE CHANGED TO**

Whether their fleets are large or small — whether their operations are on or off the road — truckers consistently tell us that for original mileage plus maximum recap recovery, Dunlop Super Gold Cup Tires are rendering tremendous service for them.

The Dunlop Truck Tire line includes outstanding highway tires plus three great special purpose tires — the Highway Extra Mileage, Trakgrip and Extra Mileage Trakgrip. Each is available in Nylon or Super High Tenacity Rayon. All are products of the longest pneumatic tire-building experience in the industry. It will pay *you* to put them on *your* trucks.

DUNLOP TIRE AND RUBBER CORPORATION

Factory and Executive Offices: Buffalo 5, N. Y.

DUNLOP — FOUNDERS OF THE PNEUMATIC TIRE INDUSTRY

**IF YOU BUY COST-PER-MILE
YOU'LL BUY**

DUNLOP
SUPER GOLD CUP
TRUCK TIRES

**DUNLOP
TIRES"**



NOW! the steam cleaner you have been waiting for...

the **ALL NEW**

"Twelve Fifty"
Series

HYPRESSURE

Jenny



Your Jenny Distributor offers it
on easy terms, with trade-in allowance
for your old steam cleaner.

You'll be glad you waited for the ALL NEW "Twelve Fifty" Series Hypressure Jenny to modernize your steam cleaning operation, because it has many features that guarantee faster and more effective cleaning at lower cost. Here are but a few of "Twelve Fifty's" advantages:

- Quiet, slow-speed, short-stroke pump; less wear; longer life; disc check valves—no adjustments; delivers a full 120 gallons per hour *at any pressure*.
- Instant starting—instant steaming. Full cleaning power in less than a minute!



- Sturdy compact design. Never before has Hypressure Jenny packed so much cleaning power into such small space.
- Hinged machinery cover affords easy and complete access to all working parts.
- Remote control—automatically shuts off pump and burner when operator closes valve on cleaning gun—saves time, fuel, compound, water and electricity.
- Cleaning power booster—stirs and preheats solution.
- Hose rack on cover, and rubber-tired wheels make it easy and convenient to take a new "Twelve Fifty" to the cleaning job.

Get full particulars on the best "Twelve Fifty" Model for your needs. Mail the coupon now. No obligation.

HYPRESSURE JENNY DIVISION
HOMESTEAD
VALVE MANUFACTURING COMPANY
"Serving Since 1892"
P.O. BOX 90 CORAOPOLIS, PA.

Send full particulars on the ALL NEW "Twelve Fifty" Series Hypressure JENNY.

I am interested in: Jobber Time Payment Plan
 Trade-in Allowance

Name _____ Title _____

Company _____

Address _____

City _____ State _____

Here's the 1956 version of the trailer that never wore out...

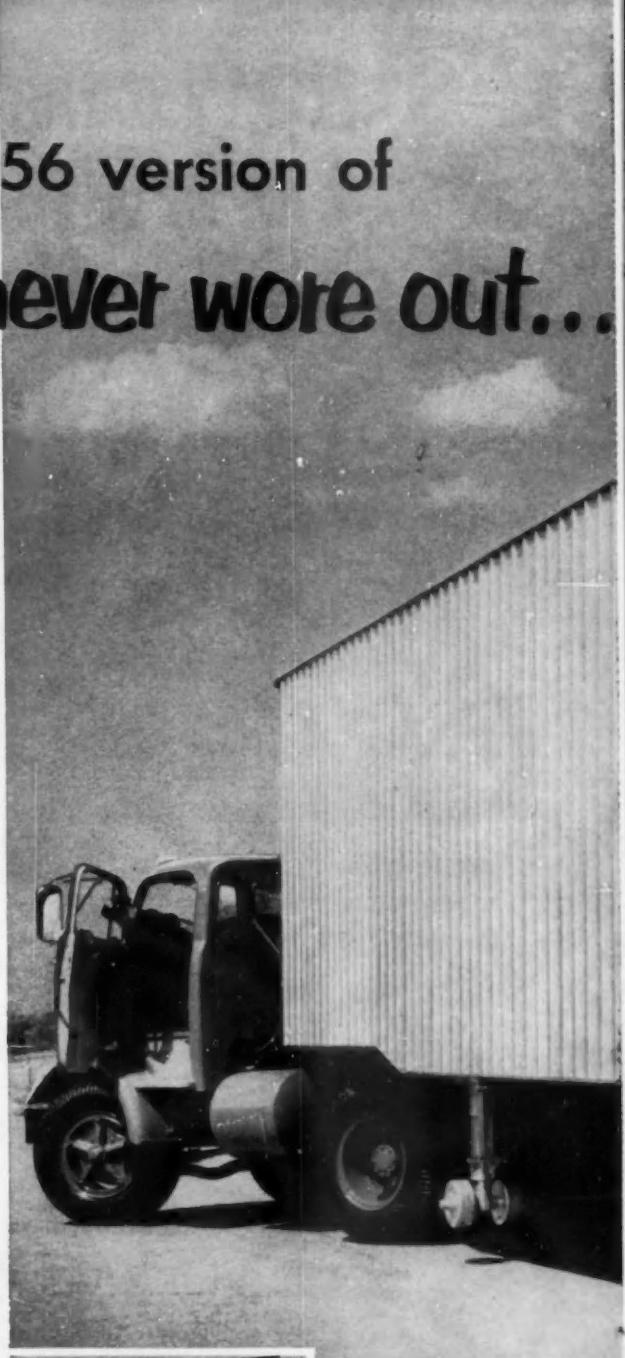
the all-Stainless Steel **"Volume Van"**

Fruehauf's new Stainless Steel "Volume Van" has to be measured to be believed. By using ingenious engineering, and strong, corrosion-resistant Stainless Steel, this Budd-designed trailer ended up with walls only one inch thick. Inside width is an eye-popping 94 inches, and the "Volume Van" will carry 2265 cubic feet of cargo!

This is a strong trailer, an improved version of the earlier Fruehauf Stainless trailer that "never wore out." 98% of all the connections are shot welded. There are practically no rivets to shake or tear loose. From the standpoint of mechanical durability and corrosion resistance, the Stainless Steel "Volume Van" stands in a class by itself.

How much do you have to pay for this extra strength and volume? Less than you think! These Stainless "Volume Vans" cost only about 6% more than lesser types of construction.

UNITED STATES STEEL CORPORATION, PITTSBURGH
AMERICAN STEEL & WIRE DIVISION, CLEVELAND
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK



MORE HEIGHT



MORE WIDTH



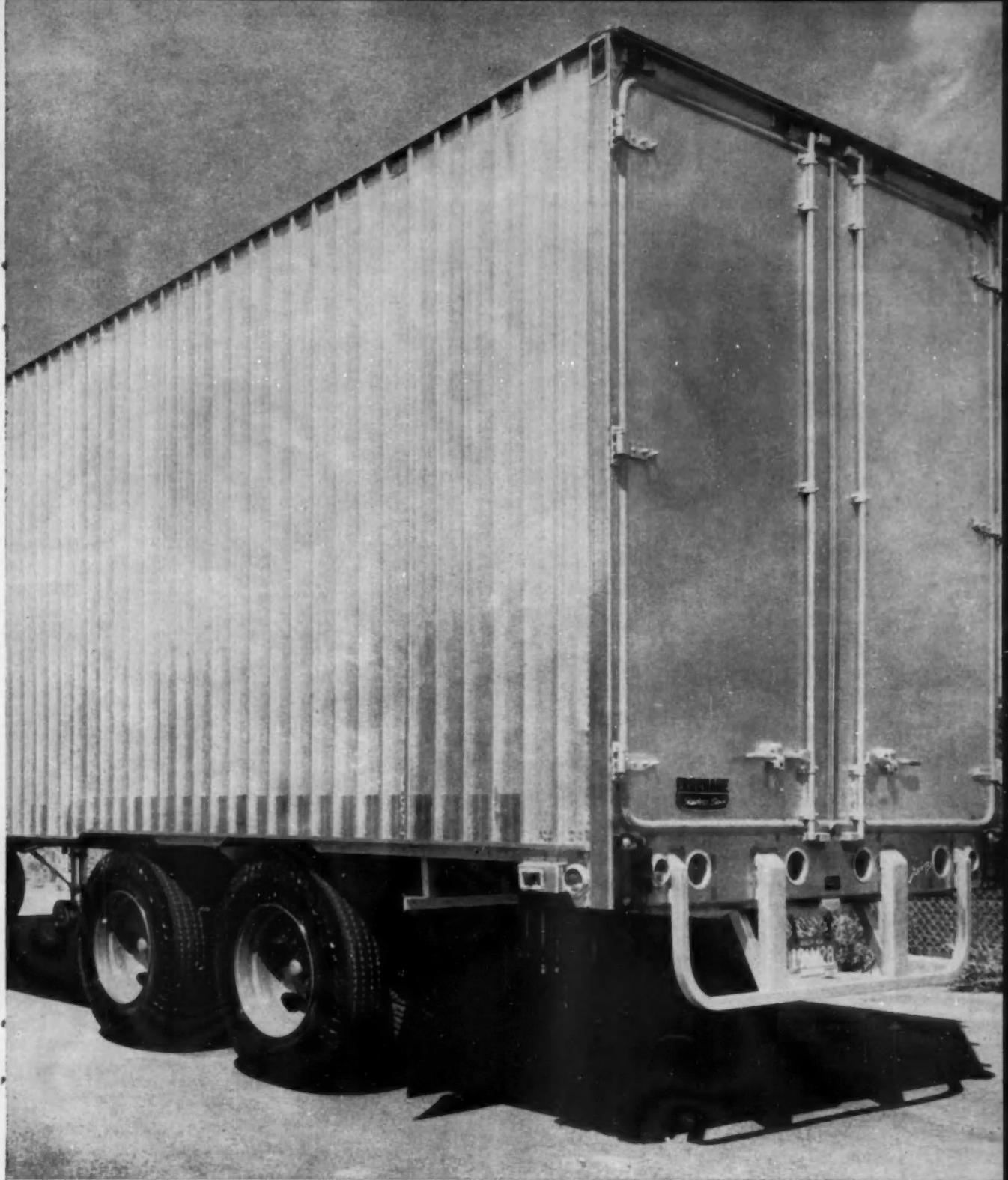
MORE LOADING AREA

Floor was lowered and roof was raised to allow more usable cubeage.

Of the 96" legal maximum, 94" are usable on the inside width. Wall is only 1" thick.

Giant hatch-type doors swing completely clear of opening. They're only 1" thick.





U S S S T A I N L E S S S T E E L

SHEETS • STRIP • PLATES • BARS • BILLETS • PIPE • TUBES • WIRE • SPECIAL SECTIONS

U N I T E D S T A T E S S T E E L

SPICER ENDS

Spicer Thornton POWR-LOK Keeps Power



SPICER THORNTON POWR-LOK CONTROLS "WILD WHEELS" ON SNOW, ICE, MUD



SPICER THORNTON POWR-LOK CONTROLS "WILD WHEELS" ON ROUGH, BUMPY ROADS

DANA CORPORATION • TOLEDO 1, OHIO

"WILD WHEELS!"

Geared to BOTH Driving Wheels!

THE Thornton POWR-LOK principle is another in the ever-growing list of safety-and power-transmission innovations developed by Dana engineers and Dana resources. It is a new concept of controlled driving-wheel power . . . the most revolutionary rear axle design in volume production since the invention of the differential itself!

The Thornton POWR-LOK Differential in Spicer Axles now makes possible the automatic delivery of controlled torque to BOTH driving wheels under all tractive conditions, and ends "wild wheels" often occurring in ordinary axles.

No more "wild wheels" that spin uselessly in mud,

ice, sand or snow. The Thornton POWR-LOK Differential enables the wheel with the better traction to apply the major driving force to the road, thereby enabling the vehicle to move.

No more "wild wheels" that spin at high speed when bounced into the air by bumps or holes and then come down with sudden stoppage, causing dangerous car swerve or destructive tire scuffing.

The Spicer Thornton POWR-LOK keeps delivering safe, controlled torque to BOTH wheels at all times, adjusting itself instantly to varying road conditions, and assuring steady propelling action to the vehicle.



Write for brochure illustrating and describing the efficiency and safety aspects of the new Thornton POWR-LOK Differential as now offered exclusively in Spicer Axles. Available for passenger cars, and light and medium-duty commercial vehicles.

Spicer

SPICER PRODUCTS: TRANSMISSIONS • UNIVERSAL JOINTS • PROPELLER SHAFTS • AXLES • TORQUE CONVERTERS • GEAR BOXES • POWER TAKE-OFFS
POWER TAKE-OFF JOINTS • RAIL CAR DRIVES • RAILWAY GENERATOR DRIVES • STAMPINGS • SPICER and AUBURN CLUTCHES • PARISH FRAMES • SPICER FRAMES

BIG payload capacity

(obtained with USS COR-TEN steel construction)

pays off on 54-mile delivery haul

Motor Freight, Inc., of New Philadelphia, Ohio, hauls coal under contract from mine to chemical plant 54 miles away. In such an operation, the bigger the payload the bigger the payoff because it means more coal hauled in fewer trips.

That's why they bought this two-trailer hopper train with USS COR-TEN Steel used in thinner sections to cut down dead weight. This equipment weighs only 29,500 pounds empty, yet can carry 48,500 pounds

of payload and still meet the Ohio legal gross weight limit of 78,000 pounds. The result, lower costs per haul, more profit for the hauler.

Says Robert Ress of Motor Freight, Inc., "This unit has been in operation only since February but has already hauled almost 8,000 tons at an average of 23.4 tons per load. We expect at least 8 to 10 years of service from it. Our future trucks will be of the same COR-TEN Steel construction."

USS High Strength Steels—USS COR-TEN, USS MAN-TEN and USS TRI-TEN—can be used singly or in combination to replace carbon steel in the vital parts of your equipment to (1) increase the service life without increasing dead weight, or (2) reduce equipment weight without reducing its strength, or (3) increase the size and capacity of equipment without increasing the total weight or the power needed to move it.

Call or write for more information

62% of the gross weight is payload. This equipment, loaded with fine coal, is ready for a 54-mile run from a coal mine owned by the Columbia-Southern Chemical Corporation, a subsidiary of Pittsburgh Plate Glass Company, to the company's plant in Barberton, Ohio. The Marion Metal Products Co., builders of this new hauler, reduced dead weight by using USS COR-TEN Steel in thinner sections, and provided lasting strength and long life because COR-TEN Steel has 4 to 6 times the resistance to atmospheric corrosion of structural carbon steel.

NOW AVAILABLE—Our new "Design Manual for High Strength Steels" is ready for distribution. This excellent book contains comprehensive and practical information that you will find extremely useful in designing your product for greater economy and efficiency by the sound use of high strength steels.

For your free copy, write on your company letterhead giving your title or department to United States Steel Corporation, Room 5051, 525 William Penn Place, Pittsburgh 30, Pa.



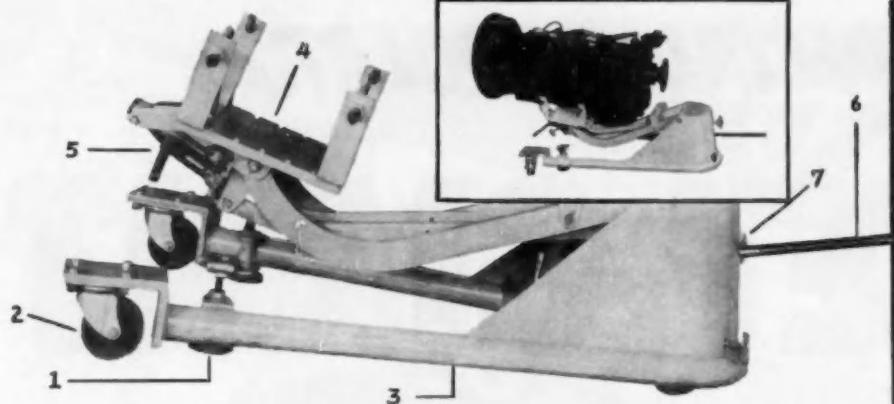
See "THE UNITED STATES STEEL HOUR"—Televised alternate weeks—Consult your newspaper for time and station.

UNITED STATES STEEL CORPORATION, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND • COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
NATIONAL TUBE DIVISION, PITTSBURGH • TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA. • UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS HIGH STRENGTH STEELS

UNITED STATES STEEL





MOVES 1200 LB. TRANSMISSIONS!

1. Position lock holds dolly to floor when installing transmission.
2. Loaded dolly moves easily on 4" heavy duty casters.
3. 2" steel pipe, one piece construction.
4. 12 inch x 14" sliding transmission platform equipped with universal cradle; hardened set screws.
5. Hydraulic jack mechanism moves platform forward.
6. Portable hydraulic jack raises and lowers.
7. Hand wheel adjusts tilt of platform.

Hydraulic controls move the sliding transmission platform forward at any desired angle, independent of the dolly frame, to align accurately for inserting spline. Drilled platform comes equipped with universal cradle, hardened set screws.

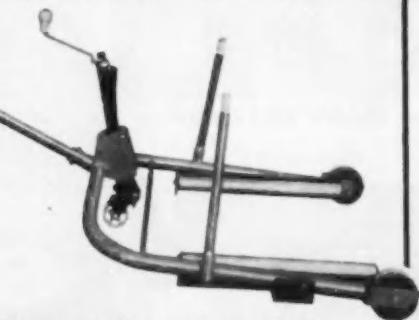
**TWO
NEW
TIME
saving
MONEY
saving
TOOLS**



In perfect balance — operator handles heavy dual wheels with ease.



Single wheels are handled with equal ease — here stabilizer is used with singles.



CAM "Y" DOLLY handles dual wheel units faster—safely!

The T-handle gives complete control of load and maneuvering. Hinged rollers assume angle of axle on jack and prevent binding. Caster-jack lifts and lowers the heaviest dual as easily as the lightest single.

for
heavy
duty
truck
operators

TIRE CHANGER



Fast and Positive

TRUCK CRANES



Mechanical and hydraulic

BEAD BREAKER



Safe for Tubeless Tires

PORTABLE CRANES



Mechanical and hydraulic

**CAM
TOOL CO.**

11 RANDWICK AVE.
OAKLAND 11, CALIF.

TO ORDER: Contact your Automotive Jobber or write direct to Cam Tool Company for catalog sheets, prices, specifications.

SPECIAL PUROLATOR

FLEET GIANT

Here is the latest addition to the
Purolator Fleet-Proved line . . .

THE PUROLATOR MICROPAK REFILL

Fits all Luberfiner Model 750 Series



Built to keep Road-time UP!

Provides positive filtration. Removes harmful dust and dirt in low micron range. Assures longer engine life, less engine repairs.

Built to keep Down-time DOWN!

Filtrant is pressure-packed in special heavy-gauge metal cans. Will outlast, outperform comparable types.

Packaged and priced to meet—and beat—fleet requirements.



Call your Purolator supplier today.

Purolator

...first in filtration

PUROLATOR PRODUCTS, INC., Rahway, New Jersey, and Toronto, Ontario, Canada. Factory Branch Offices: Chicago, Detroit, Los Angeles



MONEY-BACK GUARANTEE ON CEMCO EQUIPMENT

"If, with any CEMCO unit, properly installed, you fail to realize worthwhile savings, to your entire satisfaction, your purchase price will be cheerfully refunded."

H. L. Ekin, President



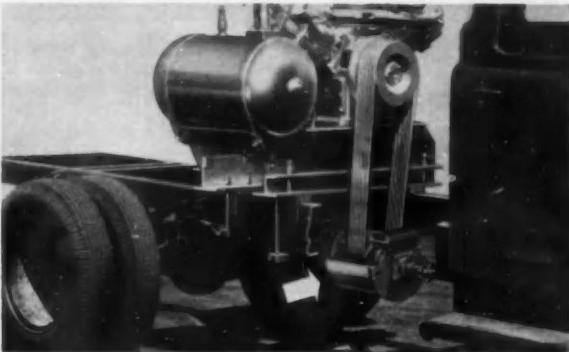
TRAILER JOCKEY—Will lift, according to size, 37,500 lbs. to 65,000 lbs. at kingpin hydraulic power under your fifth wheel—for speedier spotting of trailer bodies at terminals. Used by most of the nation's leading truckers.



FIFTH WHEEL CRANE—Attaches readily to standard fifth wheel—for lifting front end of disabled tractor or trailer. Permits cross country movement of disabled tractor with only one man. Other uses, too.



HYDRAULIC TAILGATE—Has 1 ton capacity and full closing hydraulically and other new features. Note its very favorable ratio of gross weight to pounds lifting capacity.



SPLIT-SHAFT POWER TAKE-OFF—Utilize your mobile truck power to operate truck-mounted equipment — compressors, welders, drills, etc. Delivers full power of truck motor. Soon pays for itself.

**CEMCO Industries, Inc.
Galion, Ohio**

Please send more information on:

- Trailer Jockey Fifth Wheel Crane Tailgate
 Power Take-off Am interested in becoming a dealer for CEMCO Equipment. See letter attached.

Name _____

Company _____

Street & Number _____

City & State _____

CEMCO INDUSTRIES, INC. GALION, OHIO

Also manufacturers of Mobile Machine Shops, Mobile Lubricating Units, Mobile Trailer-Weigh, Bulk Material Carriers, Hydraulic Dock Ramps.

On



"Thanks to Solex, I feel better at the end of a trip"

says Robert Kirk, Memphis, Tenn.



U.S. Highway 70 runs west through Memphis. It's a scenic route, but there's plenty of heat and blinding glare. Solex takes the sting out of the sun because it cuts down the solar heat and glare entering the cab. Makes driving easier and more pleasant.

Mr. Kirk drives for Campbell 66 Express, Memphis terminal. During the past 20 years he has driven trucks equipped with regular clear glass and with Solex® Safety Glass. We asked him how he likes Solex.

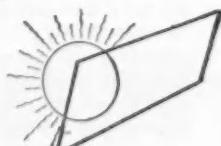
"My eyes used to burn and ache at the end of a trip," said Mr. Kirk. "Since the boss put Solex windshields in my cab most of the strain on my eyes is gone. Solex keeps heat out of the cab, too."

To prove his point Mr. Kirk says, "When I buy a new car I'm going to see that Solex is installed all the way 'round."

Solex reduces the amount of solar heat and glare entering the cab. It makes for more comfortable and relaxed driving—more alert and safer drivers. These considerations make it worth your while to get Solex Safety Glass in all your new equipment, and to replace the glass in

your present trucks with Solex.

You can get Solex in the well-known types of Pittsburgh Safety Glass—Duplate® and Duolite®—as well as in Herculite® and conventional plate glass. For more information write to Pittsburgh Plate Glass Company, Room 6110, 632 Fort Duquesne Boulevard, Pittsburgh 22, Pennsylvania.



SOLEX "the best glass under the sun!"



PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED

Cut down DOWN-TIME!



Insist on Thermoid

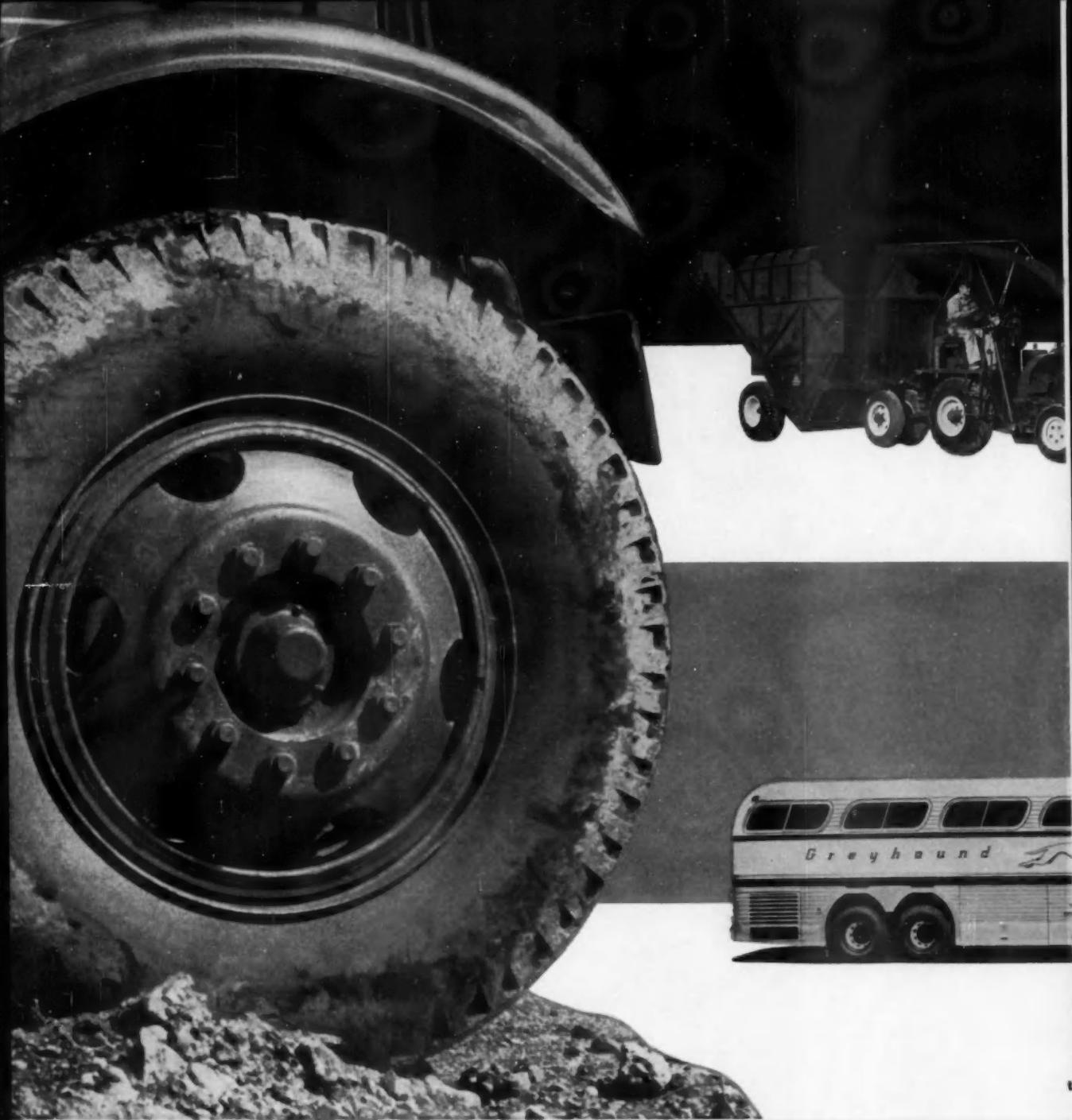
Thermoid's complete line of rubber products offers many distinct advantages which give fleet operators more miles of trouble-free service. The advantages of Neoprene are built into *all* Thermoid Heavy Duty Rubber Products. Test these outstanding products on the toughest jobs in your fleet.

- Fan Belts with Neoprene Covers resist high under-hood temperatures, abrasive road dirt, oil and grease. Pre-stretching prevents sagging and premature wear.
- Thermoid BT Neoprene Radiator Hose is built to meet the most severe conditions of bus and truck operation. Neoprene both inside and out, it provides four times greater resistance to oil, grease, and gas fumes . . . withstands 100° higher outside temperatures than ordinary hose . . . will not char or blister.



Thermoid

Thermoid Company • Trenton, New Jersey



**BUDD WHEEL
DISTRIBUTORS...**

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels, Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ATLANTA—John A. Harris & Son, Inc.
BALTIMORE—R. W. Norris & Sons, Inc.
BIRMINGHAM—Wheel, Rim & Parts Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Frey, the Wheelman, Inc.
CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAVENPORT—Stone Wheel & Rim Co.

DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. H. Wheel Service, Inc.
EVANSVILLE—Auto Wheel & Rim Service Co., Inc.
FARGO—Wheel Service Company
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel & Equipment Co.
INDIANAPOLIS—Indiana Wheel & Rim Co.
JACKSONVILLE—Southeast Wheel & Rim Co.
KANSAS CITY—Borlein, Young & Co.
KNOXVILLE—Harris Automotive Service, Inc.
LANCASTER—Standard Wheel & Rim Co.

• Budd steel disc wheels offer the most complete line of sizes and rim widths for trucks, buses, trailers, lift trucks, mining, logging, earth moving equipment and other special purpose vehicles. When buying new equipment, specify Budd. Wheels for safety, for service, for lighter weight, for built-in alignment, for long life. Designed for both conventional and tubeless tires.

The Budd Company, Detroit 15



Budd

LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Services
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Arling Equipment Co., Inc.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.
NEW HAVEN—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Co.
NEW YORK—Wheels, Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Kay Wheel Sales Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.

PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robbles', Inc.
PROVIDENCE—New England Wheel & Rim Company
RALEIGH—Caroline Rim & Wheel Co.
RICHMOND—Dixie Wheel Co., Inc.
ROCHESTER—Frey, the Wheelman, Inc.
SALT LAKE CITY—Henderson Rim & Wheel Service
SAN ANTONIO—Southwest Wheel & Equipment Co.
SAN FRANCISCO—Wheel Industries, Inc.
SEATTLE—Six Robbles', Inc.
SOUTH BEND—Wire & Disc Wheel Sales & Service
SPOKANE—Bearing & Rim Supply Co.
SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.
SPRINGFIELD, MO.—Borbela, Young & Co.
ST. LOUIS—Borbela, Young & Co.
ST. PAUL—Wheel Service Co.

SYRACUSE—Wheels, Incorporated
TACOMA—Six Robbles', Inc.
TOLEDO—Wheel & Rim Sales Co.
WICHITA—Borbela, Young & Co.
WINSTON-SALEM—United-Automotive Service

EXPORT
CLEVELAND—C. O. Brandes, Inc.

CANADA

CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
MONTREAL—Auto Wheels & Supplies, Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Fl. Garry Tire & Auto Supplies, Ltd.



Flats on the road cost money—catch 'em in the shop!

Flats on the highway can make the difference between profit and loss, yet a simple daily routine can keep your trucks rolling up profits. Gauge and record air pressure each day. Slow leaks will show up on your chart, and you can catch most flats before they happen—in the shop where they're cheap to fix.

The accuracy of your gauging-inflating equipment can be certified quickly with a Schrader 8106B Trutest Special Gauge. And air lines operate faster, better with Schrader Chucks, Couplers, Chuck Gauges and Accessories. For all tire inspections, use Schrader 7188BH All-Purpose Service Gauges. And always use genuine Schrader Tire Valves, Cores and Sealing Caps guaranteed airtight even at 250 lbs. pressure!

Schrader Products important to best tire maintenance



8106B for checking all other gauges



7188BH All-Purpose Service Gauge



3650 Type Chuck Gauge



7611 Heat-resisting Core



7612 Heat-resisting Cap

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

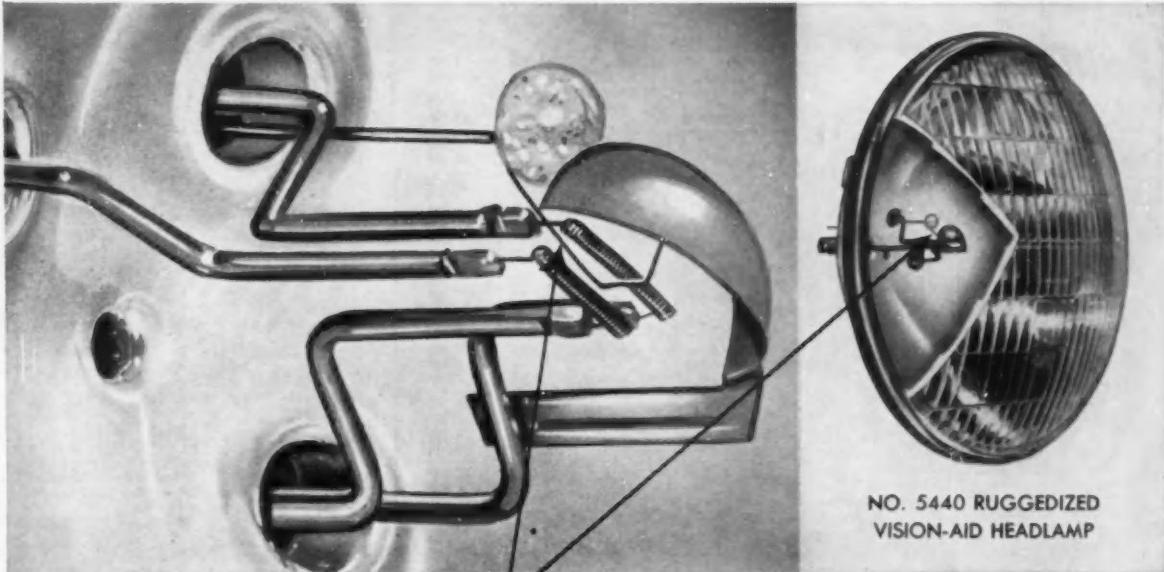
Schrader®

ESTABLISHED IN 1844

FIRST NAME IN TIRE VALVES
FOR ORIGINAL EQUIPMENT AND REPLACEMENT

TUNG-SOL VISION-AID HEADLAMP

Ruggedized FOR TRUCK SERVICE



NO. 5440 RUGGEDIZED
VISION-AID HEADLAMP

New "Filament Anchor" protects against premature burnouts

This is the headlamp with the nationwide reputation for standing up under toughest service conditions . . . for reducing headlamp replacement costs . . . and for keeping drivers out of trouble on the road because of faulty lighting.

The "filament anchor" . . . an exclusive Tung-Sol safety feature . . . provides a ruggedness that lengthens lamp life. The "anchor" keeps the top filament from sagging and prevents shorts and premature burnouts. The entire filament structure is designed to absorb shock and vibration. It safeguards the filaments and maintains accurate beam focus under all operating conditions.

Tung-Sol No. 5440 Vision-Aid Headlamps embody all the newest principles of headlamp engineering. They have the highest candlepower ever built into a production headlamp. Their improved passing beam has the greatest range, focussed for clear illumina-

nation of the vital right lane and road shoulder. And the shielded low beam filament eliminates glare-back in fog, rain and snow.

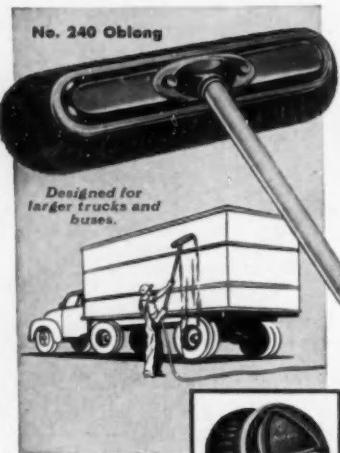
Other lamps in the complete Tung-Sol truck line have been ruggedized where service conditions indicate the need for extra durability. Standardize on Tung-Sol lamps for safety, economy and dependable service.

TUNG-SOL ELECTRIC INC., Newark 4, N. J.

Sales Offices: Atlanta, Columbus, Culver City, Dallas, Denver, Detroit, Melrose Park (Ill.), Newark, Philadelphia, Seattle. Canada: Montreal.

 **TUNG-SOL**
NO. 5440 RUGGEDIZED
VISION-AID HEADLAMPS

SPEED WASH Outlasts 3 Ordinary Fountain Brushes



NOT even three ordinary fountain brushes can match the long lasting performance that results from the superior construction and design of Speed Wash. Soft, resilient bristles (50% Nylon, 50% Select Horsehair) can't mat or tangle. Tufts are molded into block, can not come out or come loose. Steel back is waterproof and surrounded by a mar-proof bumper. Handle is zinc plated inside and out. Features like these make Speed Wash the quality brush of the trucking industry, preferred by thousands of the nation's biggest fleet operators. You'll like Speed Wash, too. Order yours today.

PRICES EITHER STYLE

	IN LOTS OF:			
Complete	1	6	12	24
with 5 ft. handle	\$12.45	\$11.65	\$10.90	\$10.15

MILWAUKEE DUSTLESS BRUSH CO.
530 North 22nd St., Milwaukee, Wis.

Please ship the following:

Quan.	No.	Item	Price
240	OBLONG SPEEDWASH		
250	ROUND SPEEDWASH		
NAME			
ADDRESS			
CITY		STATE	

March News Roundup

Continued from Page 184

1955 Truck Trailer Shipments*

	December	Twelve Months
Vans:		
Insulated and Refrigerated:		
Steel.....	129	1,081
Aluminum.....	268	4,162
Furniture:		
Steel.....	135	1,731
Aluminum.....	19	236
All other closed-top vans:		
Steel.....	1,213	10,787
Aluminum.....	2,163	23,906
Open-top:		
Steel.....	247	2,063
Aluminum.....	216	2,494
Total—Value.....	4,403	46,010
Tanks:		
Petroleum.....	472	5,019
All other.....	61	693
Total—Tanks.....	533	5,718
Pole, Pipe and Logging:		
Single Axle.....	57	789
Tandem Axle.....	58	1,386
Total.....	116	2,157
Platforms:		
Racks, livestock and stake.....	104	1,255
Grain bodies.....	74	1,016
Platforms (flats), all types.....	742	8,106
Total—Platform.....	820	10,379
Low-bed heavy haulers.....	234	2,867
Dump trailers.....	209	2,085
All other trailers.....	379	4,053
Total—Complete Trailers.....	6,794	73,269
Chassis only.....	246	2,997
Total—Trailers and Chassis.....	7,040	76,266

* Industry Division, Bureau of the Census.

INTRODUCING . . .



. . . Harry E. McCormick, Jr., sales manager, Unisteel Body Co. division, Hercules Galion Products, Inc., Galion, Ohio.

. . . Richard R. Rowe, appointed safety and personnel director, Alkire Truck Lines, Kansas City, Mo. He was safety center director, Kansas Highway Carriers Assn.

. . . Harrison B. Haney, transportation manager, Tide Water Associated Oil Co., San Francisco, Cal.

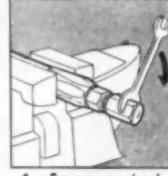
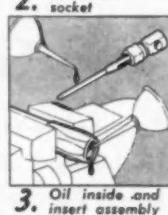
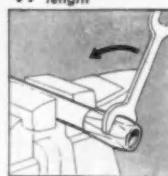
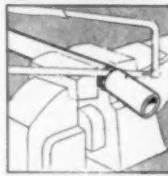


(TURN TO PAGE 222, PLEASE)

"Do it Yourself"



Hose and Fittings



STRATOFLEX, INC., FORT WORTH, TEXAS

P. O. BOX 10398

BRANCH PLANTS

LOS ANGELES AND TORONTO

SALES OFFICES

ATLANTA • CHICAGO • NEW YORK • SAN FRANCISCO

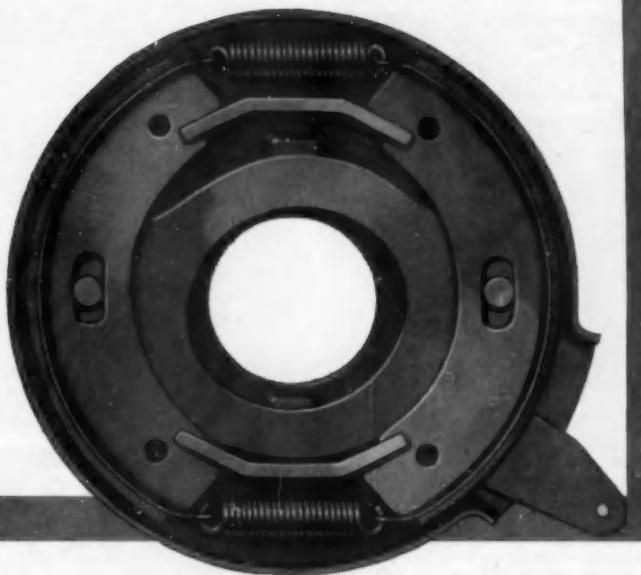
DAYTON • HOUSTON • KANSAS CITY • PORTLAND • TULSA

IN CANADA

STRATOFLEX OF CANADA, INC., TORONTO 18, ONTARIO

TDA® BRAKES

*where you
have
equipment
to control
or
stop...*



THE VERSATILE NEW DLM BRAKE

by Timken-Detroit® can offer remarkable help!

Versatility! Flexibility! The revolutionary DLM will serve effectively with a variety of equipment. It has already proved its value as a control or parking brake, and is used extensively on trucks, buses, machinery, farm equipment, cranes, shovels, hoists, golf buggies, and lift trucks.

Highly Efficient! The DLM brake is basically a self-energizing two-shoe brake in which both shoes do the same amount of work—give equal forward and reverse torque output, regardless of drum rotation.

Simpler! Only 8 parts, with interchangeable shoes and springs. Lubrication is not required. No internal adjustment necessary. Enclosed design guards against

entrance of foreign matter and requires only a minimum of maintenance.

Lighter! More Payload Advantages! Improved TDA design using lightweight fabricated steel shoes and brake supports saves many pounds over heavier, more costly brakes.

For additional information and expert consultation about your control or brake problems contact Timken-Detroit® Brake Division. Complete specifications on the DLM are available.

©1956 RS&A Company



For every industrial or automotive application
where braking is required!

TDA plants at: Detroit, Michigan • Oshkosh, Wisconsin • Utica, New York
Ashtabula, Kenton and Newark, Ohio • New Castle, Pennsylvania

TRUCK MECHANICS·OWNERS

**Set Valve Clearance
Exactly Right!**

Every Time with



New Technique 100% Accurate

Now you can set valve clearance on most OHV gasoline and diesel truck engines uniformly and with micrometer accuracy instead of depending upon individual "feel".

Check these VALVE-GAPPER advantages:

- Reduces Valve Adjustment time as much as 50%.
- Eliminates Inaccuracies of Individual "Feel".
- No Change in Adjustment Procedure; ONLY Method of Measurement Differ.
- Serviceman can "SEE" Clearance on Dial Indicator BEFORE, DURING and AFTER adjustment.
- Both Hands FREE to Use Adjusting Tools.
- Use Dial Indicator for Other Shop Tasks.

Models Available to fit
these Truck Engines:
GM DIESEL • GMC GASOLINE
CUMMINS DIESEL
INTERNATIONAL HARVESTER
FORD • CHEVROLET
DODGE • REO • OTHERS

BOTH HANDS FREE

Service man always has both hands free to use adjusting tools—he can "see" exact clearance before, during and after adjustment.



Order From Your Jobber or Write

P&G MANUFACTURING CO., Dept. B-B
305 N. E. Russell St., Portland 12, Oregon
Please send me Valve-Gapper literature and prices.

Firm Name _____

Your Name _____

Address _____

City _____ Zone _____ State _____

Engines Serviced:

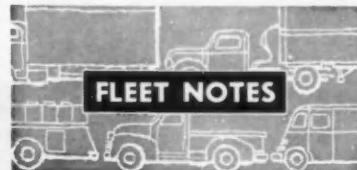
- Passenger Car
- Diesel
- Gas Truck
- Gas Industrial

My Jobber Is: _____

March News Roundup

Continued from Page 220

... Frank T. Murray, parts and service sales manager, axle Division, Eaton Mfg. Co., Cleveland, Ohio.



Spector Freight System and Mid-States Freight Lines, both of Chicago, have asked ICC permission to merge. Together they would operate a 2600-vehicle fleet, employ about 3000 persons, have gross revenue estimated at \$50 million.

Dallas Transit Co., Dallas, Texas, has completed converting its 61 routes to bus operation.

Consolidated Freightways, Portland, Ore., announces it will award 12

to 17 college scholarships of \$500 each in 1956 in the states of California, Oregon, Washington, Idaho, Montana, North Dakota, Minnesota, Wisconsin, Illinois, Nevada and Utah.

Roadway Express, Akron, Ohio, has ICC temporary authority to operate M & R Transportation, Springfield, Mass.

Spector Freight System, Chicago, began using its Clark Mobilvans in piggy-back service last month.

Montreal Transportation Commission, Montreal, Quebec, Canada, has ordered 250 new buses including 125 44-passenger and 50 50-passenger Cancars, 50 50-passenger Macks and 25 50-passenger GMC's.

Glenn Contracting Co., Seagoville, Texas, has added 52 Fruehauf hopper dump trailers to its fleet.

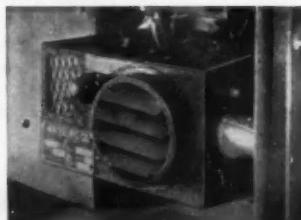
Kingsway Transports, Montreal, Quebec, Canada, has received a community service citation from American Trucking Assns. Terminal Operations Council for the planning and operation of its new Lyndhurst, N. J., terminal.

Virginia Stage Lines, Charlottesville, Va., has ICC approval to buy Consolidated Bus Lines, Bluefield, W. Va.

(TURN TO PAGE 224, PLEASE)



HUNTER Gasoline-Burning Heaters FOR GAS OR DIESEL RIGS



- Sure safe heat, thermostatically controlled
- Shirtsleeve warmth in coldest weather
- Sub-zero starting, unfailing combustion
- Conform to all ICC regulations
- Operate independent of vehicle engine
- Eliminate costly engine idling
- Economical, compact, easy to install

Write for descriptive literature, specifications, prices.



HUNTER MANUFACTURING CO.

30525 AURORA ROAD, SOLON, OHIO

More Strength Per Pound Per Dollar



... that's bargain buying in delivery truck bodies. It means a strong, light, long-lasting body that carries more payload.

That's why more and more truck body buyers are turning to Boyertown Auto Body Works—famous for carriage and delivery truck bodies for 83 years.

Every Boyertown body is built of high-strength, low-alloy steel—press-formed by Parish Pressed Steel Company—makers of more than 7,000,000 automotive frames . . .

. . . and Parish fabricates with Alan Wood's high-strength, low-alloy steel—Dynalloy.

For more strength—per pound—per dollar in truck bodies, choose Dynalloy . . . fabricated by Parish . . . and built into a body engineered by Boyertown.

The result is bound to be satisfaction!

ALAN WOOD STEEL COMPANY
steelmasters for 130 years • CONSHOHOCKEN, PENNA.

DISTRICT OFFICES AND REPRESENTATIVES: Philadelphia • New York • Los Angeles • Atlanta
Boston • Buffalo • Cincinnati • Cleveland • Detroit • Houston • Pittsburgh • Richmond • St. Paul
San Francisco • Seattle • Montreal and Toronto, Canada—A.C. Leslie & Co., Limited

IRON PRODUCTS
"Swede" pig iron
STEEL PRODUCTS
Plates (sheared)
A.W. Dynalloy
(high-strength steel)
Hot rolled sheets
Hot rolled strip
Cold rolled sheets
Cold rolled strip
ROLLED STEEL
FLOOR PLATE
A.W. ALGRIP
abrasive
A.W. SUPER
DIAMOND Pattern
COAL CHEMICALS

A.W. CUT NAILS
Standard &
Hardened
MINE PRODUCTS
Iron ore
concentrates
Iron powder
Crushed stone
Sand
COKE
Foundry,
industrial &
metallurgical
PENCO METAL
PRODUCTS DIVISION
Steel cabinets,
lockers & shelving



DY-91



**DE CAMP BUS LINES breaks
all records with TELEFLEX®**

Tachograph linkage

More than 230,000 rugged tachograph miles have been logged by a 45-foot, one-piece Teleflex Tachograph cable on a bus belonging to De Camp Bus Lines, Clifton, New Jersey. Together with four other buses from the fleet, De Camp has experienced more than a million miles from its Teleflex Tachograph Linkages—without cable failure, repair, lubrication, or other maintenance. And all are still going strong!

You can have the same results—for truck fleet, or bus fleet operations. Teleflex is a high-strength cable uniquely designed to tackle successfully the problem of downtime due to cable failure. Operating in its own precision-made flexible or rigid and flexible conduit, Teleflex gives you the service you expect from your Tachographs. When they're Teleflex equipped—your Tachographs are *always* on the job, making fleet operations more economical, safer, and more efficient.

REMEMBER! Your next Tachograph cable replacement can be the last—if you replace with Teleflex!

**FOR DETAILS OF TELEFLEX
TACHOGRAPH INSTALLATIONS—**

WRITE for the Tachograph linkage bulletin; Teleflex Incorporated, 125 S. Main Street, North Wales 2, Pa.

TELEFLEX

MECHANICAL CONTROLS

LINKAGES

MECHANISMS

**230,000
maintenance-
free
miles!**

March News Roundup

Continued from Page 222



Fleets awarding their outstanding safe drivers recently include:

Carolina Freight Carriers, Cherryville, N. C.—to nine drivers. The nine work out of the fleet's Medford, Mass., terminal and were presented with their awards at the terminal's annual banquet.

Harrison Motor Freight, Secaucus, N. J.—to 22 Boston, Mass., terminal drivers.

Express Freight Lines, Milwaukee, Wis.—to 61 drivers. Total record of the group was over 300 years of safe truck driving.

Transport Motor Express, Fort Wayne, Ind.—to seven drivers. The seven have individual records of five years each without a chargeable accident, a total record of some 2.6 million miles.

Clark's Express, Spencer, Mass.—to 11 drivers. Four have individual records of five years or better.

O. K. Heilman, Ford City, Pa.—to 15 drivers. Awards were made at the fleet's annual dinner.

Tamiami Trail Tours, Tampa, Fla.—to four drivers. One of the drivers has well over a $\frac{1}{2}$ million miles



Century Gas Equipment Co., Paramount, Cal., announces its LP-gas carburetion is exclusive factory equipment on Reo's Model No. Super V-63 COE and optional equipment on Reo's standard LP gas models.

Galion Allsteel Body Co., Galion, Ohio, announces appointment of Brown-Clark Equipment Co., Richmond, Va., as central and western Virginia distributors.

Strick Trailers, Division of Fruehauf Trailer Co., Philadelphia, announces (TURN TO PAGE 227, PLEASE)

what's the

BIG NEWS in TRUCK TIRES

The big news in truck tires—as in all tires—is, of course, TUBELESS! The tubeless tire answers a definite need for more efficient and economical fleet performance. It runs cooler, lasts longer—reduces maintenance, saves time and money.

INSURE THESE SAVINGS WITH PROPER SERVICE

Because of the extra rigidity and heavy beads built into new, large tubeless truck tires, it is extra important to use RuGLYDE Rubber Lubricant when mounting and demounting. RuGLYDE insures faster, safer, easier tubeless tire changes . . . won't cause rust . . . insures against damage to the air seal areas. Insures perfect bead seating, and RuGLYDE's exclusive "Controlled Friction" action prevents after slippage.

Use RuGLYDE in the handy RuGLYDE Service Kit for best results. Write for details.



**AMERICAN GREASE STICK
COMPANY**
MUSKEGON, MICHIGAN
AN AGS PRODUCT

(Advertisement)

Quick-Opening Fasteners: Screw Type or 1/4 Turn?

Know the features of each before you specify.

M. R. TUOZZO

The selection of a quick-operating door fastener usually involves a choice between two basic designs; the quick-acting screw fastener and the $\frac{1}{4}$ turn fastener. Both are relatively inexpensive. Each has advantages that make it the logical choice for certain applications.

THE SCREW FASTENER is a rugged, square threaded screw assembly engaging in a special heavy stamped nut. The nut is clipped, riveted, or welded to the door frame. A special washer behind the thread captivates the screw in an oversize hole in the door.

Because of its exceptional "float," it is installed without precision measure-

ments and will always line up with ease. Where a variation in material thickness may occur or a gasket must be compressed, the screw fastener is preferred, since a single grip length can be used throughout. Under most conditions it will completely disengage in two to four turns. It offers excellent resistance to vibration and forms a solid joint with no "give."

The screw fastener can be backed all the way out of the door frame without moving the door. If required, it can be installed so as to joggle the door open as it is unscrewed.

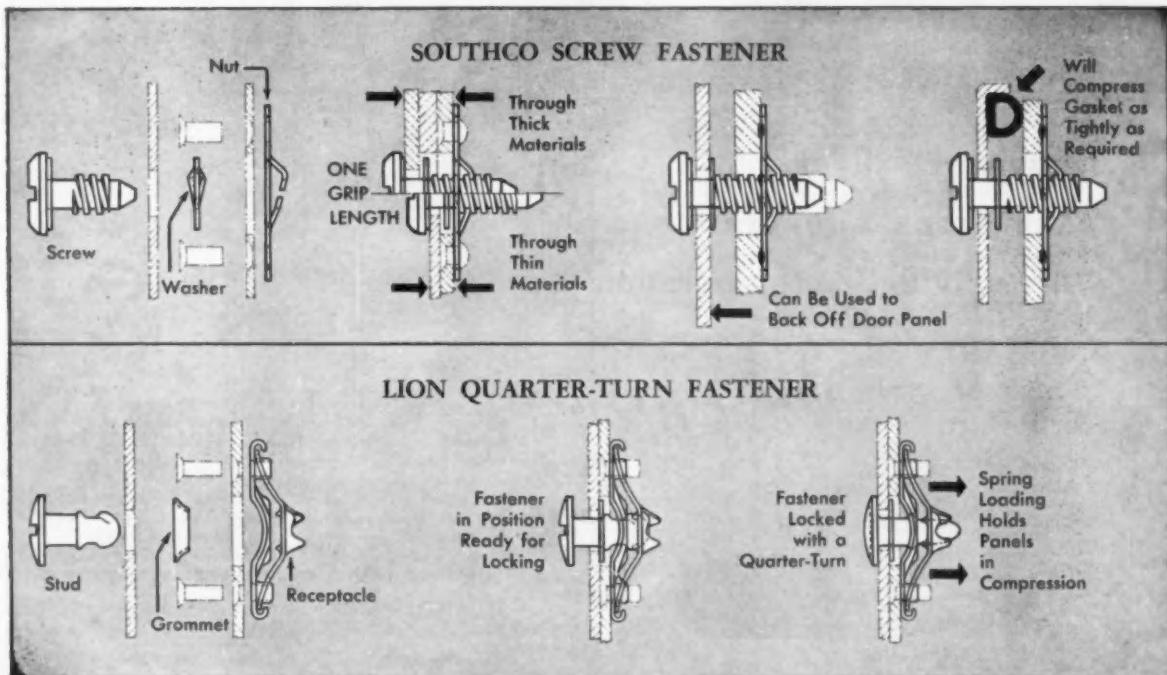
THE QUARTER-TURN FASTENER is usually selected for application on aircraft (under Army-Navy-Air Force specification MIL-F-5591A) where in-

stantaneous removal of fastened parts is required. As the name implies, it is quickly locked or unlocked by a fractional turn.

Its strength characteristics also are very high when the stud is formed from a single piece and no thin springs, wires, or cross pins exist in the assembly. The stud is retained in the door panel by a metal grommet, and engages in a full floating spring-loaded receptacle, riveted or welded to the door frame.

Where the thickness of door and frame are fairly constant through an entire production run, the quarter-turn fastener is a wise choice. Its design affords maximum speed in fastening, and excellent vibration resistance.

COMPARISON OF STANDARD QUICK-OPENING FASTENERS

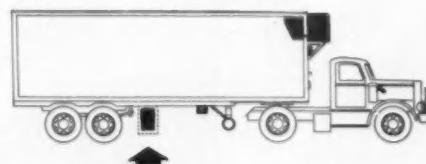


SOUTHCO Division, South Chester Corporation, 228 Industrial Hwy., Lester, Pa.

If you're looking for dependability on the road...



...Equip your fleet
with Tropic-Aire-Carrier...
the only trailer refrigeration
unit covered by a
FULL YEAR'S WARRANTY!



EITHER FRONT OR UNDERSLUNG MOUNTING



TROPIC-AIRE, INC., 5201 W. 65th Street, Chicago 38, Illinois

Tropic-Aire, Inc., is a subsidiary of McGraw Electric Co.

March News Roundup

Continued from Page 224

nounces it will erect a one story manufacturing plant in California this year.

Diveo Corp., Detroit, is offering its 130-in. wheelbase, Model No. 42 Dividend Series both in standard and medium-duty units. Production line version has a 7000-lb GVW rating. With optional equipment — dual wheels, larger tires, heavier springs, heavier axles, etc.—vehicles can be had rated at 10,000, 12,000 and 14,000 lb GVW.



New state laws and regulations include:

Alabama—New law levies a 1¢ per gal tax on selling, distributing or storing gasoline, kerosene and diesel

fuel in Blount County (H54XXXX).

Arkansas—The state has cancelled reciprocity with Ohio. Ohio trucks must register and pay same fees as Arkansas truck owners.

Georgia—New law provides 13 per cent tolerance on vehicle length and width limits, limits maximum weight with tolerance to 63,280 lb, provides a graduated series of penalties for weight violations (H114).

Indiana—City of Indianapolis has passed an ordinance regulating and licensing household goods haulers.

Kansas—Motor buses operated under SCC authority are subject to an annual \$50 regulatory fee (H50). Provisions for registration have been amended and fees have been increased for local trucks (S9). Fees for excess size and weight permits have been amended (H11). LP gas has been exempted from "special fuels" definition and 2¢ of the tax imposed on such fuel (H20).

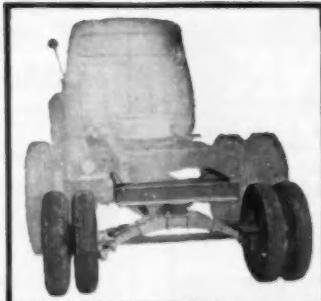
Kentucky—Vehicles transporting explosives or flammable liquids are required to stop before crossing railroad tracks (H49).

Maryland—Increases in registration fees scheduled to go into effect
(TURN TO NEXT PAGE, PLEASE)

SAVE \$1000!

with the

new design FOX tandem axle



- Sells for about $\frac{2}{3}$ less than other tandem axles.
- "Follows" around curves . . . eliminates fatigue and tire wear.
- No changes to body or truck frame necessary.
- Axle assembly can be attached or removed in minutes, as needed.

Now you too, can afford a tandem . . . if you buy the low cost Fox Tandem! Start making more profit through increased payloads . . . by fewer trips and lower operating costs. This new design permits tandem wheels to "follow" around curves thus eliminating tire wear and fighting the wheel. Installation is simple and inexpensive . . . requires no changes to body or frame. Once mounting bracket is attached to truck frame the tandem axle may be installed or removed in a few, easy minutes!

Get extra dollars from extra payloads! Write today!

FOX BODY CO.
BOX 621-C JANESEVILLE, WISCONSIN

"THIS LUBRICANT CUT OVERHAULS IN HALF"
—says WESTERN AUTO TRANSPORTS, INC.

"Operating over 200 tractors and 200 trailers from Detroit to the West Coast, we encounter temperatures from 120° above across the desert to 40° below in the mountains of Colorado. We have found that with LUBRIPLATE our wheel bearing packing mileage has tripled. Since using Lubriplate A.P.G.-90 in our transmissions and differentials, we are getting double the mileage between their overhauls."

REGARDLESS OF THE SIZE AND TYPE OF YOUR MACHINERY, LUBRIPLATE LUBRICANTS WILL IMPROVE ITS OPERATION AND REDUCE MAINTENANCE



For nearest LUBRIPLATE distributor see Classified Telephone Directory. Send for free "LUBRIPLATE DATA BOOK" . . . a valuable treatise on lubrication. Write LUBRIPLATE DIVISION, Fiske Brothers Refining Co., Newark 5, N. J. or Toledo 5, Ohio.



Speed Truck Tire Changes

**JOB-DESIGNED
WITH KEN-TOOLS**
EASIER...QUICKER

Quality tools for trucks, buses, farm tractors, and aircraft. Hand forged from chrome nickel alloy steel. Tougher, last much longer!

T-19 24" Truck and Bus Straight Spoon

T-20 24" Truck and Bus Curved Spoon

T-29 18" Tool for starting first bead down over rim

T-48A 48" Tool for removing and replacing lock rings

KEN-TOOL LOCK RING REMOVERS
stand up under tremendous leverage

T-23 24" For Firestone RD, R-1 Rims

T-25 New 18" Ring Remover for 5" Firestone Rims

T-22 18" Combination Lock Ring Tool

T-27 18" Ring Tool for R-1 Rims

SEE YOUR JOBBER on the complete line of Job-Designed Ken-Tools. Forged by the largest exclusive manufacturer of top-quality Tire-changing Tools and Equipment. THE KEN-TOOL MFG. CO., AKRON 5, OHIO.

**JOB-DESIGNED
KEN-TOOLS**

TIRES CHANGING
TOOLS KNOWN, USED
AROUND THE WORLD



March News Roundup

Continued from Page 227

March and April, 1956, have been postponed until 1957 (S575). Vehicle title tax does not apply where ownership change involves only change in name of individual, company or corporation (H645).

Massachusetts—New law regulates transfer of vehicle registrations by same owner of two vehicles (H1942). Need to print powers-of-attorney on vehicle registration and driver license applications is eliminated (H-1548).

Virginia—Driver license fee is increased to \$1 (H26). New law provides for regulation of design and installation of safety belts (H104).

END

Please Resume Reading Page 110

Classified Advertisements

TRUCK DECALS—unusually low-priced, printed in plastic colors to give more brilliance, longer life. No charge for sketch in color. Representatives wanted—write for samples. Allied Decals, Inc., 3420 Hough Avenue, Cleveland 3, Ohio.

U. S. company has Central American opening for Garage Foreman on single status. Supervising repair and maintenance gasoline and Diesel automotive equipment. Includes preventative maintenance schedules, emergency repairs and instructing native mechanics in proper work methods. Knowledge of Spanish helpful but not essential. Well established camp. Salary plus room and board. Box 13, Commercial Car Journal, 5601 Chestnut St., Philadelphia 39, Pa.

FRINK
SNO-PLOWS
REG. U. S. PAT. OFF.

Both "V" TYPE and
ONE WAY BLADE TYPE
hand or power hydraulic control
FOR ALL MOTOR TRUCKS
FROM ½ to 10 TONS

FRINK SNO-PLOWS, INC., CLAYTON, 1000 HI, N.Y.
FRINK SNO-PLOWS OF CAN. LTD., TORONTO, ONT.

There are now
120 Water Pumps
in our line
Hohlert Corporation
LANSING 5 MICHIGAN

BOWERS BATTERIES

Always Better

BOWERS BATTERY & SPARK PLUG CO., READING, PA.

I'm young in
the car biz,
but I know
Stant . . .



Used as Original Equipment
on America's Finest Automobiles

W. G. B. makes OIL FILTERS

from
60 to 750 Cu. In.
Capacity



...and Cartridges for
all makes of Filters.

Write for Details

W. G. B. OIL CLARIFIER, INC.
First By Test Since 1931 KINGSTON, N. Y.

MOTOR TRUCKS
CRANE CARRIERS
CUSTOM BUILT CHASSIS
GENERATOR SETS

WARNER & SWASEY CO.

DUPLEX

DIVISION
LANSING, MICHIGAN

WOLF'S HEAD
HEAVY DUTY
MOTOR OIL
100% PURE PENNSYLVANIA
Exceeds
EVERY REQUIREMENT
FOR HEAVY DUTY OIL

TRICKS OF THE TRADE from PERMATEX



COAT CHROME DISCS—Annoying rattle often develops when gravel or small stones get behind the chrome discs on car wheels. A thick coating of Form-A-Gasket No. 1 on the inside of the discs completely eliminates the noise.



STOP OIL SEEPAGE—Apply Form-A-Gasket No. 3 on both sides of gaskets to stop oil seepage around valve covers, panels and pan. It makes a perfect seal—won't harden—and gaskets are easy to remove the next time.

FORM-A-GASKET® Universal Sealing Compounds LEAKPROOF—PRESSURE-TIGHT

Check tips like these for new ways you can use Form-A-Gasket, best sealant going for leakproof, pressure-tight assemblies. Form-A-Gasket resists gasoline, water, hot or cold oil—many other liquids and gases. And it's specially made to withstand the pressures of high-compression engines.

Every Shop Needs All 3 Types



No. 1. Sets quickly
—dries hard

No. 2. Sets slowly
—remains pliable

No. 3. Brushable
Liquid—remains tacky

Hundreds of uses around the house, too



FOR VAPOR LOCK TROUBLE—Coat the fuel pump and lines with Form-A-Gasket No. 2. It forms an effective insulation barrier at the hot spots.

PERMATEX COMPANY, INC.

Brooklyn 35, N.Y. • Kansas City 15, Kans.

More than 50 Chemical Products for Better Automotive Maintenance



"Oil Consumption Eliminated When We Switched To LE Universal Gear Oil"

... say Fleet-owners from coast to coast!

It's amazing but true! Fleet-owners across the nation acclaim the superiority of LE UNIVERSAL GEAR OILS in minimizing and in many cases eliminating needless consumption of costly gear oils due to evaporation. Here are reasons why LE's UGL is unsurpassed in quality.

You gain from the experiences of others when you switch to LE Universal Gear Lubricant.



INDUSTRIAL LUBRICANTS FOR INDUSTRIAL EQUIPMENT
LUBRICATION ENGINEERS, INC.
FORT WORTH, TEXAS

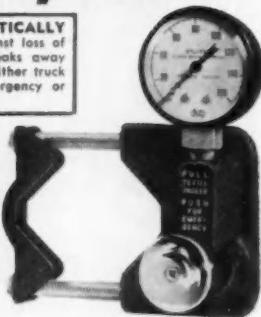


Who Makes the SAFEST Breakaway System?

Get the Facts and Compare Before You Buy!

Send for your copy of the Williams Safety Breakaway System Check Chart and see how much more protection you can get with a Williams ES-60 Safety Kit.

ES-60 AUTOMATICALLY
SAFEGUARDS against loss of
air when trailer breaks away
... air is lost on either truck
or trailer ... emergency or
service lines break.



Manufactured by the Pioneer in Brake Safety

POWER BRAKE EQUIPMENT COMPANY

1632 S. E. 11th Ave. Portland 14, Oregon

MAKERS OF THE "THIRD BRAKE" . . . THE WILLIAMS COMPRESSION BRAKE SYSTEM

NEW

SIOUX

ELECTRIC IMPACT WRENCH

No. 325 \$99.75
No. 330 \$127.50

WITH THE EXCLUSIVE REVERSE CAP SWITCH LOCK. IT CAN'T BE REVERSED WITH THE SWITCH ON. IT LASTS LONGER.

ALBERTSON & CO., INC.
SIOUX CITY, IOWA, U.S.A.



YOUNGSTOWN STEEL CAR CORPORATION
NILES, OHIO

Large scale producers of . . .
big weldments on a production basis—die pressed channels for bus, truck and trailer chassis—railway cars, repairs and parts — miscellaneous heavy presswork.

**BIG! DRAMATIC! COLORFUL!
CHOOSE MEYERCORD DECALS
FOR YOUR TRUCK FLEET**

You'll identify and promote your business more effectively with bold, colorful, long-life Meyercord Truck Decals. Use any combination of lettering and illustration . . . in any combination of colors. Let us prove how Meyercord Decals can save you money and build your business. Write us . . . no obligation.

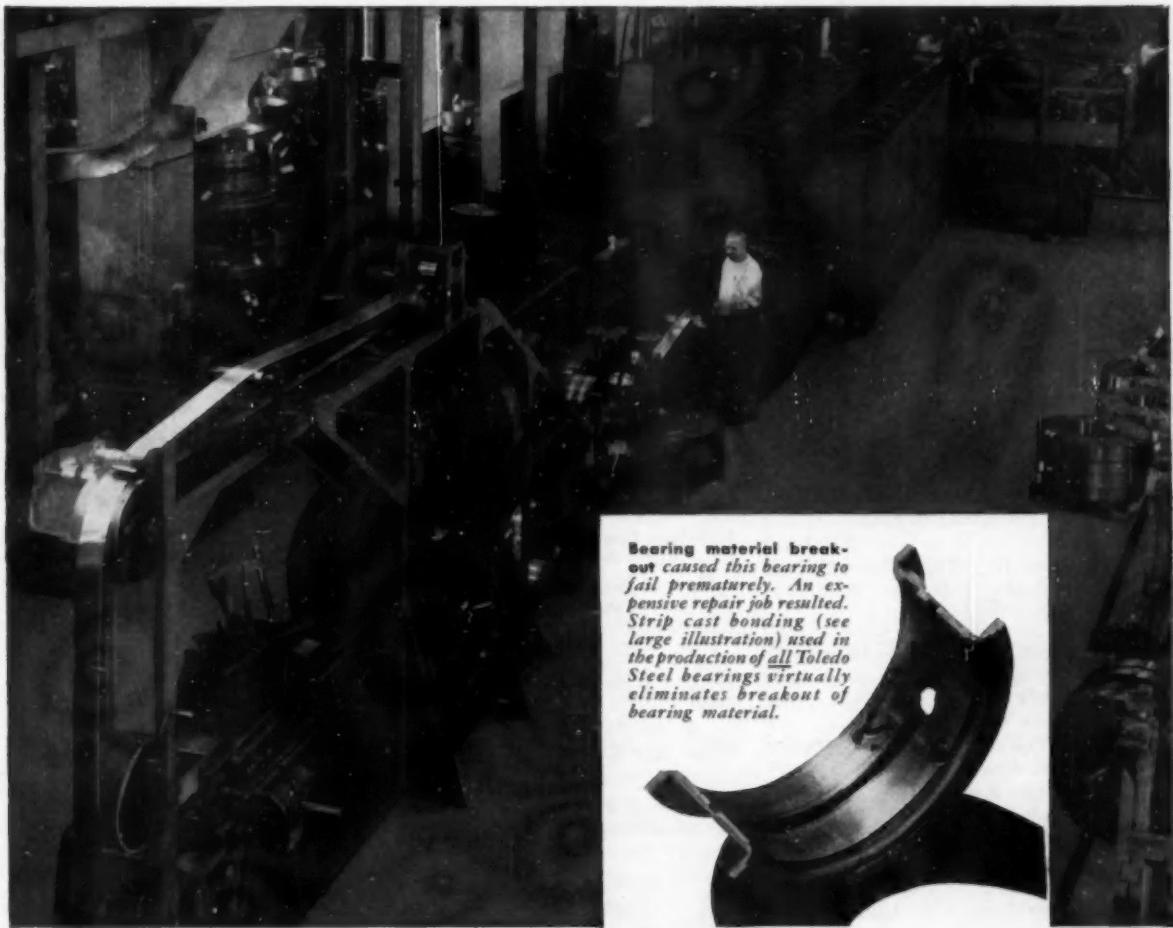


DEPT. P-515
5323 W. LAKE ST.
CHICAGO 44, ILLINOIS

THE MEYERCORD CO.
World's Largest Decalomania Manufacturers

BUY BONDS





Bearing material break-out caused this bearing to fail prematurely. An expensive repair job resulted. Strip cast bonding (see large illustration) used in the production of all Toledo Steel bearings virtually eliminates breakout of bearing material.

STRIP CASTING OF TOLEDO STEEL BEARINGS VIRTUALLY ELIMINATES BEARING MATERIAL BREAKOUT

Superior bonding method chemically welds bearing materials to steel back

- The patented strip casting method used to bond bearing materials to steel backs in Toledo Steel bearings gives them greater fatigue strength and load carrying capacity. Bond breakdown—a prevalent cause of failure in conventional heavy duty bearings—is virtually eliminated.

FOR LONGER BEARING LIFE AND FINER ENGINE PERFORMANCE,
INSTALL TOLEDO STEEL CL-77 OR MICRO BEARINGS

TOLEDO STEEL PRODUCTS

6402 CEDAR AVENUE • CLEVELAND 3, OHIO

Division of Thompson Products, Inc.

Index to

*This Advertisers' Index is published
of the advertising contract. Every
rectly. No allowance will be made*

AC Spark Plug Div. G M. Corp.	204
Electronics Div.	52-53
Oil Filters	11
Aeroquip Corp.	123
Alan Wood Steel Co.	223
Albertson & Co., Inc.	230
Aluminum Co. of Amer.	185
American Chain & Cable Co.	
Automotive & Aircraft Div.	124
American Grease Stick Co.	224
American Liquid Gas Corp.	140
American Steel & Wire Div.	
206-207-210	
American Steel Foundries.	180-181
Anthony Co.	152
Armco Steel Corp.	183
Auto Lite (Spark Plugs)	176-177
Auto Specialties Mfg. Co.	
3rd Cover	
Autocar Div. White Motor Co.	63
Automotive Industries, Inc.	125
Bacharach Industrial Instrument Co.	233
Barber's Glass & Mfg. Co.	198
Bartlett Trailer Corp.	178
Bell Telephone System.	126-127
Bendix Aviation Corp.	
Eclipse Machine Div.	121
Products Div.	145
Bendix Westinghouse Automotive Airbrake Co.	58-59
Black & Decker Mfg. Co.	42-43
Bonney Forge & Tool Wks.	122
Bostrom Mfg. Co.	50
Bowers Battery & Spark Plug Co.	228
Braden Winch Co.	174
Brown Trailers, Inc.	117 thru 120
Budd Company	216-217
Cam Tool Co.	211
Cemco Industries, Inc.	213
Champion Spark Plug Co.	15
Chevrolet Motor Co.	34-35
Cities Service Oil Co.	99
Classified Advertisements ...	228
Coats Co.	166
Cole-Hersee Co.	12
Columbia-Geneva Steel Div.	
206-207-210	
Dana Corp.	208-209
Dayton Rubber Co.	234
Delco-Remy Div.	32-33
Detroit Aluminum & Brass Corp.	156
Ditzler Color Div.	141
Dodge Div. Chrysler Corp.	
2nd Cover	
Dole Valve Corp.	172
Dunlop Tire & Rubber Co.	204
Duplex Div. Warner & Swasey Co.	228
Du Pont de Nemours Co., Inc.	
Fabrics Div.	195
Nylon Tirecord	44
Refinishes Div.	179
Eaton Mfg. Co.	
Axle Div.	107
Valve Div.	133
Eberhard Mfg. Co.	158
Eis Automotive Corp.	184
Erie Malleable Iron Co.	182
Federal Mogul Service Div.	
Bower Bearings, Inc.	30-153-154
Firestone Steel Products Co.	175
Ford Motor Co.	
Parts & Service Dept.	97
Truck Dept.	48-49
Four Wheel Drive Auto Co.	Back Cover
Fox Body Co.	227
Fram Corp.	149
Frink Sno-Plows, Inc.	228
Fuller Mfg. Co.	40-41
GMC Truck & Coach Div.	26-27
Gar Wood Industries, Inc.	23
General Tire & Rubber Co.	
Air Springs	54-55
Kraft System	21
Globe-Hoist Co.	200
Goodrich Co., B. F.	31
Goodyear Tire & Rubber Co.	
Air Foam	4
Tire Dept.	38-39
Grote Mfg. Co.	162
Hansen Mfg. Co., A. L.	186
Hastings Mfg. Co.	163
Hein-Werner Corp.	191
Hennessy Sales Co., Jack P.	228
Homestead Valve Mfg. Co.	205
Hoof Products Co.	146
Hunter Mfg. Co.	222
Hygrade Div. Standard Motor Prod., Inc.	168
Ingersoll-Rand	116
International Harvester Co.	65
Johns Manville	192
Jones & Laughlin Steel Corp.	111
KD Lamp Co.	130
Kaiser Aluminum & Chemical Sales, Inc.	56-57
Kelly-Springfield Tire Co.	188-189
Ken Tool Mfg. Co.	228
Kester Solder Co.	129
King-Seeley Corp.	139
Kinnear Mfg. Co.	132
Lee Rubber & Tire Corp.	13
Leece-Neville Co.	165
Libbey-Owens-Ford Glass Co.	147
Linde Air Products Co.	148
Lubrication Engineers, Inc.	230
Lubriplate Div. Fiske Bros. Refining Co.	227
McQuay-Norris Mfg. Co.	187
Mack Trucks	114-115
Magnus Chemical Co.	144
Mechanics Universal Joint Div.	199
Meyercord Co.	230
Midland Steel Products Co.	103
Milwaukee Dustless Brush Co.	220
Moraine Products Div.	202-203
Muncie Parts Mfg. Co.	164
National Motor Bearing Co.	45
National Tube Div.	206-207-210
Neway Equipment Co.	61
New Britain Machine Co.	113
Niehoff & Co., C. E.	112
Oakite Products, Inc.	14
Olson Corp., J.B.E.	1
P & G Mfg. Co.	222
Packard Electric Div.	170-171
Perfect Circle Corp.	16
Permatex Co., Inc.	229
Phillips Petroleum Co.	159
Pittsburgh Plate Glass Co.	214
Power Brake Equipment Co.	230
Prior Products, Inc.	190
Purolator Products, Inc.	212
Raybestos Div. Raybestos-Manhattan, Inc.	37
Reo Motors, Inc.	135 thru 138
Reynolds Mfg. Co.	36
Rinch McIlwaine, Inc.	233

Advertisers

as a convenience, and not as part
care will be taken to index cor-
for errors or failure to insert

Schrader's Son, A. 218
Sealed Power Corp. 8
Service Recorder Co. 128
Shuler Axle Co. 93
Signal Stat Corp. 105
Simplex Fifth Wheel Div. 193
Snap-on Tools Corp. 95
Snyder Tank Corp. 10
Socony-Mobil Oil Co. 22
South Chester Corp. 225
Standard Motor Products, Inc. 168
Standard Oil Co. (Calif.) 29
Standard Oil Co. (Indiana). 150-151

Stant Mfg. Co.	228
Stewart-Warner Corp.	155
Stratoflex, Inc.	220
Teleflex, Inc.	224
Tennessee Coal & Iron Div.	
206-207-210	
Texas Co.	6-7
Thermoid Co.	215
Thompson Products, Inc.	
Valve Div.	194
Timken Detroit Brake Div.	221
Timken Roller-Bearing Co.	51
Toledo Steel Prod. Div.	231
Trailmobile, Inc.	160-161
Tropic-Aire, Inc.	226
Trucktor Corp.	173
Tung Sol Electric, Inc.	219
Union Oil Co.	109
United Motors Service Div.	196-197
United States Rubber Co.	46-47
United States Steel Corp.	
206-207-210	
United States Steel Supply	
Div.	206-207-210
Vickers, Inc.	101
WGB Oil Clarifier, Inc.	228
Wagner Electric Corp.	
Air Brakes	28
Brake Parts	24-25
Tachograph	89
Walker Mfg. Co.	
Jacks	142-143
Oil Filters	157
Warner & Swasey Co. (Duplex	
Div.)	228
Waukesha Motor Co.	167
White Motor Co.	87
Wilkening Mfg. Co.	169
Wohlert Corp.	228
Wolf's Head Oil Refining Co.	228
Wood Co., John	134
World Bestos	201
Yankee Metal Products Corp.	3
York Hoover Corp.	131
Youngstown Steel Car Corp.	230
Zollner Corp.	60

RIMAC SPRING TESTERS Come Highly Recommended



Manufacturers of automobiles, trucks and farm machinery have made Rimac Valve and Clutch Spring Testers standard plant equipment—recommend them for service and overhaul operations.

Etched metal scale at sides indicates exact length of spring; adjustable stop allows quick testing of an entire lot. Suitable for springs up to 2 inches diameter, 4½ inches length—capacity 0-250 lbs.

Ask your jobber or write for literature.

RINCK-McILWAINE
INC.
16 HUDSON STREET, NEW YORK 13, N.Y.

FREE to Every Shop Operator



- Diesel Compression Testers
- Nozzle Testers for American Bosch, Caterpillar and Bendix Nozzles
- Cummins Injector Tester
- International Harvester Injection Testers
- General Motors Injector Testers
- Injection Pump Calibrating Stands
- Nozzle-Injector Cleaning Tools and Lapping Blocks
- Engine Overhaul Stands
- Engine Removal and Parts Dollies
- GM 71 Engine Tools

SEND COUPON
NOW

BACHARACH INDUSTRIAL INSTRUMENT CO. • 7301 PENN AVE., PGH., PA.

Send us FREE copy of your Diesel Shop Manual AD54

We are: Fleet Operators Injection Service Shop
 Diesel Manufacturers Parts and Engine Distributors

NAME _____

COMPANY _____

STREET _____

CITY and STATE _____

2

AD-15

New Ideas Pay Off in the Trucking Industry

Amazing **NEW 8 PLY** Truck Tire

30% Stronger . . . Pounds Lighter !



Excess bulk eliminated! Stronger, lighter Dayton Thorobreds give more original and recap mileage.

Stronger than 12-Ply Rating Tires! Yes, Dayton's new 8-Ply tire is actually 30% stronger than the average of four other leading first line 10-Ply (12-Ply rating) tires of comparable size!

How is it possible? Dayton's exclusive 2200 Denier Super Cordura construction is the answer! 2200 Super Cordura — the strongest — is made even stronger by Dayton's special electronic processing.

Why 8 super-strong plies give more miles per dollar! 8-Ply 2200 Super Cordura construction reduces heat-producing bulk. Reducing heat, a major cause of tire deterioration, means a cooler-running tire; therefore, a longer-lasting tire.

These new Dayton Thorobred 8-Ply Truck Tires are paying off, month after month, for forward-looking truck operators. Tire costs formerly con-

sidered standard have been reduced. The stronger, cooler-running Thorobred carcass gives longer original mileage, takes more recaps . . . pays off in lower cost per mile. In addition, reduced tire weight allows greater payload potential, still another step in reducing cost per mile.

Put Dayton Thorobreds on all your present trucks and trailers, and be sure to specify them on all new equipment purchases to get maximum mileage at lowest cost.

Call your Dayton Dealer for quick action or write direct to Dayton.

	50	60	70	80	90	100
DAYTON						
Brand A						
Brand B						
Brand C						
Brand D						

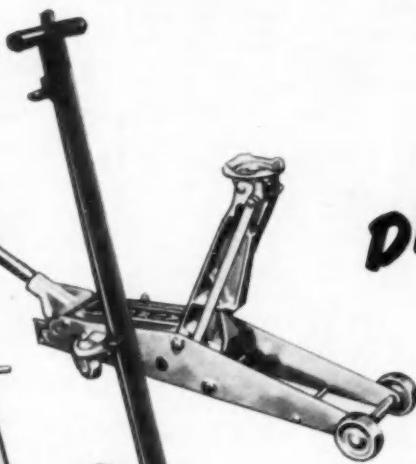
THE DAYTON RUBBER CO., TIRE DIVISION, DAYTON 1, OHIO



Dayton Thorobred Tires

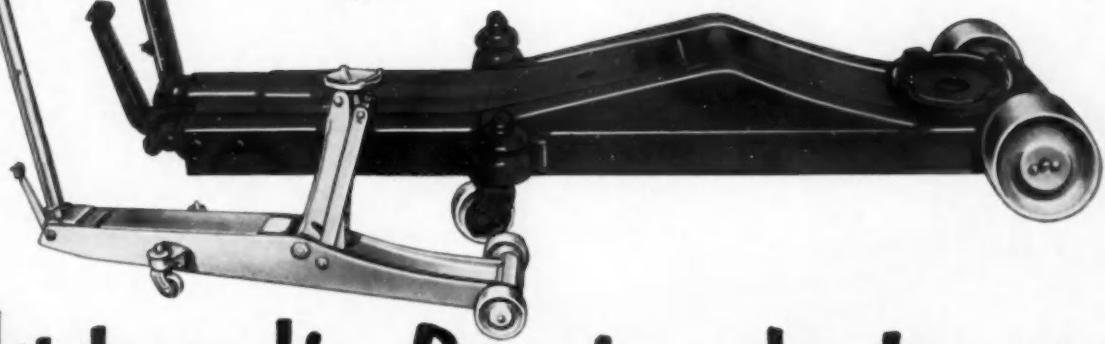
A COMPLETE LINE OF THOROBRED
TRUCK AND PASSENGER CAR TIRES

© D. R. 1956



DEMAND
AUSCO

for the finest fastest
HEAVY DUTY Jacks made!



Hydraulic Service Jacks

2-4-10
TON
MODELS

Ausco Hydraulic Axle Jacks Preferred for Heavy Service Use.

Throughout the entire Ausco line dependability is the direct result of superior engineering and precision construction. So for the most-for-your-money jack performance, use AUSCO.



Ausco Hydraulic Axle Jacks are available in 20, 12, 8, 5, 3 and 1-1/2-Ton Standard Range models, and 12, 8, 5 and 3-Ton Hi-Range models



AUSCO JACKS are tough, dependable and safe . . . to give the finest, most dependable service in heavy-duty truck operations!

TOUGH . . . Rugged steel chassis have swivel rear wheels for quick positioning . . . malleable load rests and lifting arms for longer full capacity service!

DEPENDABLE . . . Simple, quick-acting pump and release for full load control . . . 4 and 10-ton jacks have fast-lift lever for convenient spotting and raising saddle to load.

SAFE . . . Jacks lift to 25" and hold safely . . . safety valves prevent overload.

See Your **AUSCO JOBBER** for Complete Information on these Quality Jacks, or write to:
AUTO SPECIALTIES MFG. CO., INC. Saint Joseph, Michigan. Other Plants in Benton Harbor and Hartford, Michigan and Windsor, Ont., Canada.

AUSCO . . . Manufacturers of
Quality Jacks
for
every service need!



Transmission Jacks



Bumper Jacks
Bipod, "Y-Bar"
Ratchet
and Frame Models



One-End Lifts
Hydraulic & Mech.



Garage Horses
2 and 5 tons



Mechanical
Axle Jacks
Single and
Double-Screw
Models

Hard facts for hard-buying fleet owners . . .

No other truck can match FWD for Payload, Safety, Traction!

CHECK THE CHALLENGE in the big new line of FWDs. They are unmatched for payload, safety and traction!

Fitting a fleet for profitable operations calls for proof and that's where FWD has been closing hundreds of new sales. Whatever your heavy-duty truck requirements, it will pay you to look at these FWD facts:

Petroleum carriers are hauling up to 300 extra gallons per run with the new FWDs. The new FWD One-Man Cab is giving 3½ extra feet or 10% more cargo cube! New, shorter dimensions plus FWD's scientific weight and power distribution permit up to 20% more king-pin load on the powered front axle for the greatest payload story of them all!



BIGGER PAYLOAD



GREATER TRACTION



HIGH SPEED SAFETY

Look at FWD's "get-there" traction and safety. Independent tests by a leading university engineering project proved four wheel drive delivers up to 82% greater traction than rear wheel drive even when it's slippery. Tire wear savings proved as high as 37%. Skidding or "fish-tailing" was practically eliminated and jackknifing was found to be almost impossible. In rough terrain or weather conditions, FWDs are the only trucks that consistently maintain schedules.

A fast-growing list of new FWD customers is proof of confidence . . . but this is more important: of FWD sales are repeat sales from fleet buyers who know from experience that FWD is unmatched for payload, safety, and traction!

FWD heavy-duty trucks are serving profitably in petroleum transport, freight transport, utility line construction and maintenance, oil well exploration and servicing, logging and mining, road maintenance, pipeline hauling and laying, sugar cane transport, snow removal, municipal sanitation, ready-mix concrete, fire fighting (pumpers, tankers, aerials, crash trucks) and many other truck-killing jobs around the world.



THE FOUR WHEEL DRIVE AUTO COMPANY

CLINTONVILLE, WISCONSIN • Canadian Factory, KITCHENER, ONTARIO